

MILITARY MEDICINE

ORIGINAL ARTICLES

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*The Kober Lecture**

The Challenge of Painful Syndromes

By

WINCHELL McK. CRAIG, M.D.†

The Kober Lecture is presented annually at Georgetown University, Washington, D.C. Every third year the Association of Military Surgeons of the United States has the honor of designating the lecturer.

Dr. George M. Kober was a native of Germany. In 1867 he enlisted in the U. S. Army and was assigned as Hospital Attendant and later Hospital Steward at Carlisle, Pa. In 1871 he was ordered to the Surgeon General's Office of the Army, Washington, D.C., for duty. He enrolled in night courses given at Georgetown University Medical School. After receiving his medical degree he became a Contract Surgeon in the Army and served until 1886.

Dr. Kober returned to Washington where he established his practice and further associated himself with Georgetown University. He became dean of the Medical Department of the school in 1901 and held that position until 1928. He became prominent in the medical field. His death in 1931 ended a brilliant and extremely useful career.

In 1923 Dr. Kober set up a trust fund for the Kober Lectures to begin in 1925. There was a stipulation that the lecture would be given under the auspices of Georgetown University.

This year the Association of Military Surgeons of the United States had the honor of designating the Kober Lecturer and chose Rear Admiral Winchell McK. Craig, Medical Corps, U. S. Naval Reserve, Retired. Dr. Craig is a past president of our Association. He is a consultant to the Surgeon General of the U. S. Navy. During World War I Dr. Craig, who was at that time in Johns Hopkins University School of Medicine, enlisted in the U. S. Army and was assigned to the Medical Department. After the war he completed his medical studies and graduated from Johns Hopkins in 1919. He became a Fellow of the Mayo Foundation, and, in 1925, became an Instructor. In 1926 he became a member of the Section of Neurosurgery of the Mayo Clinic, and he was head of this section from 1946 to 1956. In 1937 he became Professor of Neurosurgery, Mayo Foundation. During World War II, Dr. Craig was Chief of Surgery at the National Naval Medical Center, Bethesda, Maryland. He returned to the Mayo Clinic, Rochester, Minn., after the war.

FOR ME to return to Washington and to Georgetown University at this time is a very special privilege. I say this because while I was on duty as chief of surgery at the Naval Hospital at Bethesda dur-

ing the war, I visited your hospital on many occasions to look after Navy dependents. I recall that the first visit took me to the X-ray Department to view some films, and the very first person I encountered was Dr. Fred Coe. Back in college, we had dissected in comparative anatomy together, and despite the confusion and excitement of the war, we

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† Professor of Neurosurgery, Mayo Foundation, University of Minnesota, Rochester, Minn.



REAR ADMIRAL WINCHELL MCK. CRAIG,
MC, USNR-RET.

really had a memorable reunion. Going back into the wards, I chanced to meet a very old friend, Dr. Fred Sanderson, at that time your professor of surgery. These old and well-remembered friends, with many others who I am happy to say became new ones, always gave me a very cordial welcome. Dr. William Herbst, a grandnephew of your celebrated Dr. George M. Kober, was another old friend.

I could not be other than deeply impressed by the honor conferred upon me by your university and by the Association of Military Surgeons of the United States, of which I am a past president. To commemorate the just renown of Dr. George M. Kober, I was asked by the university and by the association to give this lecture. I accepted with pleasure, for he was truly a physician of uncommon distinction and an educator of signal gifts. He served this university well as Professor of Hygiene, Dean of the Medical School and member of the Board of Regents, and he lent his talents to the United States Army as Acting Assistant Surgeon from 1874 to 1886. He left an enduring

symbol of his loyalty to his Alma Mater as well as to his farsightedness and enthusiasm for teaching by establishing these lectures as a vindication of animal experimentation.

I have chosen to memorialize George M. Kober by speaking to you on the subject of "The Challenge of Painful Syndromes," because I believe he would have been unusually alert to the fact that the best clinicians and surgeons at times are confused by the accounts of pain given by patients, and I am sure he would have been quick to welcome any addition to our knowledge of this often baffling difficulty.

THE VAST DOMAIN OF PAINFUL SYNDROMES

In a recent survey of the motivations of patients who consult their physicians, it was found that the great majority seek counsel because of abnormal sensations, such as discomfort or pain. The pain which brings the patient to the physician may be varied and sometimes difficult to explain. In such an obscure situation a detailed history should be taken and then evaluated very carefully. Next, a comprehensive physical examination should be conducted.

Pain itself is extremely difficult to define because it is a purely subjective sensation. It may be the result of an emotional, psychic or physical stimulation. To the patient, emotional pain and psychic pain are as real as physical or organic pain, and for this reason emotional pain and psychic pain constitute one of the chief stumbling blocks in the differential diagnosis of painful syndromes. Functional or organic pains may be the results of an emotional exhaustive state, hysteria, habit reaction, or the consequences of an inadequate personality. Unfortunately, any attempt to relieve such pain by surgical measures is likely only to aggravate the condition.

On the subject of the problem of painful syndromes, I like to quote the French physician, René Leriche,¹ who said: "In every age, mankind has been subject to pain, and yet today we know very little about it. The sub-

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jective phenomena of the pain and its imperceptibility to the other person may explain this fact." He emphasized that the peculiarities of the individual color the conception of pain and its real meaning, and, similarly, the personality of the individual regulates the development and maintenance of physical pain. Constant association with patients teaches us that they differ in their reactions to pain; one may be insensitive to what another could tolerate only with great suffering. For this reason, the response to pain appears to be due to different grades of will power and character, as well as to physiologic gradients in the threshold of tolerance.

PAINFUL SYNDROMES WITHIN THE HEAD

Almost as many causes of painful syndromes of the head can be listed as there are diseases, without producing a painful syndrome that is characteristic. The treatment consists in determining and removing the cause.

Errors of refraction and of muscle imbalance of the eyes should be investigated. Blood dyscrasias, especially when they are associated with anemia, and other causes of anoxemia, such as poor ventilation, may produce severe headaches. Cerebral vascular disease frequently is the cause of severe headaches, especially on change of posture. Lowering of the blood pressure at night, after the patient has gone to bed, has been found to be responsible for some types of headache, and raising the head of the bed even as high as 18 inches has been recommended for relief. Hypertension, when it increases intracranial pressure and the pressure created by cerebral neoplasms, is characterized by severe pains in the head. Renal vascular disease and uremic states cause tension headaches, probably as a result of edema of the brain. Intoxication with drugs, alcohol, carbon monoxide and other agents may be the cause of pain in the head. Myositis of the occipitocervical muscles and cervical arthritis have been known to cause symptoms referable to the entire head. Thrombosis of the venous sinuses and hydrocephalus cause severe intractable head pains, as does en-

cephalitis brought about by any cause, with meningeal reactions. Pathologic involvement of the sinuses of the head may produce a painful syndrome, as indicated by roentgenograms. In fact, we must acknowledge the fact that painful syndromes involving the head may be caused by, or associated with, any disease.

Conversely, painful syndromes occurring elsewhere in the body may be caused by lesions in the brain involving the sensory cortex or pathways. Moreover, certain diseases with manifestations in the body, such as Parkinson's disease, are caused by lesions of the brain. Animals have been used to localize these lesions by stereotaxic methods, and deep electrodes have been implanted for diagnostic purposes. Again, the involved areas of the brain have been attacked surgically, or by injection of alcohol or by the application of roentgen rays or focused ultrasonic energy.

The effects of injuries to the head may be immediate or remote, disabling physically or mentally, and they may result in pain or convulsions. In attempts to explain these effects, and particularly the painful syndrome, experiments have been carried out on animals and have yielded results of tremendous value.

For instance, during the war, monkeys were used at the U. S. Naval Hospital at Bethesda in studies of the brain by means of direct observation through transparent lucite skull caps. It thus became possible to study, over periods of time, the effects of trauma, anesthetic agents, anoxia and the introduction of air. Motion pictures were made which aided not only in diagnosis and treatment but also in teaching.

NEURALGIA

The painful syndrome we have come to recognize as "neuralgia" is characterized by intermittent paroxysmal pains along the course of the cranial or spinal nerves, with no loss of function or evidence of damage to nerves. I am happy to be able to say that the list of primary neuralgias diminishes as medical knowledge increases. As an example

of this, consider how the diagnosis of herniated or protruded lumbar intervertebral disks has virtually eliminated the diagnosis of "primary sciatic neuralgia." Today we believe that neuralgia must be considered a symptom and not a disease, and as a symptom it may be the first indication of tabes dorsalis, tumors of the brain or spinal cord, a malignant lesion or arthritis of the spinal column, herpes zoster, aortic aneurysms and other conditions equally difficult to diagnose. Actually, the diagnosis of "neuralgia" should be made only after exclusion of all possible organic or psychogenic causes.

THREE MAJOR NEURALGIAS

Only three major neuralgias have been recognized. They consist of (1) the particular pattern of pain in the face known as "trigeminal neuralgia," (2) a distinct pattern of pain in the ear and throat, known as "glossopharyngeal neuralgia," and (3) a distribution of pain over the posterior aspect of the neck and occipital region known as "occipital neuralgia."

There are minor, or atypical, neuralgias of the head, among which are the so-called sphenopalatine neuralgia, superior laryngeal neuralgia, tympanic neuralgia, geniculate neuralgia, erythromelalgia of the head, temporal arteritis and herpes of the trigeminal nerve. Other pains about the head and face may result from involvement of an eye or of the nasal and paranasal sinuses and structures, as well as from changes about the temporomandibular joints.

Trigeminal Neuralgia. The painful syndrome recognized as trigeminal neuralgia is characterized by severe paroxysmal pain in the areas served by one or more branches of the fifth cranial nerve. The pain is lancinating and superficial; a typical episode has an abrupt onset and termination, usually persisting less than a minute. The attacks frequently are initiated by stimulation in any given contiguous area, such as the angle of the mouth, the cheek or a tooth. Eating, drinking, washing the face or shaving may initiate a paroxysmal attack of trigeminal neuralgia, and the patient soon learns to

avoid contact with the so-called trigger zones in which the stimuli can originate. A man fearful of such attacks will forego shaving, washing or even eating. Associated with the paroxysms of pain may be a mild vasomotor disturbance, such as flushing of the face, watering of the eyes, salivation, discharge from the nose and perspiration. As time advances, the paroxysms tend to become more frequent and prolonged.

The treatment of trigeminal neuralgia in the early stages is alcohol injection of the peripheral branches and, subsequently, surgical division of the posterior root of the gasserian ganglion.

Permanent relief from trigeminal neuralgia is obtained, in the majority of cases, by intracranial division of the nerve. This procedure, however, results in loss of the sensations of touch and pain on the entire side of the face affected, including the eye. The sensory loss in the cornea causes the patient to be unaware of cinders and other foreign irritating substances which chance to lodge in the eye. Hence, abrasion of the cornea may occur and ulcers may form, threatening vision. To protect the patient from this complication, Baker and Gottlieb² carried out experiments on cats which definitely proved the protective effects of sympathetic denervation, which reduces the danger of corneal ulcer and threatened loss of sight.

Glossopharyngeal Neuralgia. The painful syndrome recognized as glossopharyngeal neuralgia consists of a sudden or ticlike pain in the sensory distribution of the ninth cranial nerve, involving the tonsillar fossa, the posterior portion of the tongue or the oropharynx, the auditory canal and the tympanic membrane. Glossopharyngeal neuralgia assumes the same ticlike or lancinating type of pain as that of trigeminal neuralgia, but it affects the throat, posterior part of the tongue and the ear. The pain often spreads to the angle of the jaw. Rarely do patients complain of actual pain in the ear but a large percentage of patients with glossopharyngeal neuralgia can be seen to rub the external auditory meatus during attacks. The periods when pain will be absent are as

unpredictable as they are in trigeminal neuralgia.

The cause of glossopharyngeal neuralgia is unknown, although cases have been reported in which the condition was associated with other diseases. The only satisfactory treatment of glossopharyngeal neuralgia is intracranial division of the ninth, and sometimes a portion of the tenth, cranial nerve. This is done through a cerebellar craniotomy; the ninth and tenth nerves are easily identified.

Occipital Neuralgia. The third major painful syndrome which I listed with trigeminal neuralgia and glossopharyngeal neuralgia is the so-called occipital or cervico-occipital neuralgia. It is characterized by severe pain in the distribution of the occipital nerves, chiefly the greater, arising from the second and third cervical nerves. Tenderness over the point of exit of the great occipital nerve, a point midway between the mastoid process and the first cervical vertebra, may be present. Deep pressure often relieves the pain of occipital neuralgia, but light touch, such as brushing the hair, may be extremely aggravating. The pain, in most cases, is described as being continuous, with superimposed paroxysms. The pain must be distinguished from the pain caused by diseases of the cervical vertebrae, such as primary or metastatic tumors, intraspinal tumors, myalgia, cervical arthritis or epidural abscesses. Occasionally, small palpable nodules of "myositis" are present in the muscles underlying the areas involved with occipital neuralgia.

The treatment of occipital neuralgia consists of diagnostic paravertebral injection of the three upper cervical nerves. If it is found that the pain can be controlled by the injection of procaine hydrochloride, the diagnosis generally is occipital neuralgia and intradural resection of the sensory components of the first three cervical nerves is indicated.

MINOR NEURALGIAS

Temporal Arteritis. Temporal arteritis, consisting of severe, throbbing head pain, swelling over the face, redness of the skin over the temporal arteries and hyperalgesia

of the scalp as well as visual loss, may be encountered. The pain, which may be confused with that of trigeminal neuralgia and other neuralgias about the face and head, usually is self-limited, with a course of 1 to 20 months, with the exception of ocular manifestation. Pathologically, the condition itself cannot be distinguished from periarteritis nodosa. It is believed that cortisone and the related steroid compounds will control temporal arteritis as long as it endures, and that these agents will at least prevent progression of any loss of vision which is associated with the pain.³ Relief of pain is dramatic, in most instances.

Pain in the Neck. Neck pain, or pain referable to the brachial plexus, which extends from the fifth cervical nerve to the first thoracic nerve, usually can be attributed to a specific cause, such as protruded intervertebral disk or tumor in the cervical sector, cervical ribs or the scalenus anticus syndrome, tumors of the apex of the lung, infection, trauma, subclavian aneurysm, aortic aneurysms, coronary disease, metastatic tumors, deformities of the dural pouch, or the so-called shoulder-hand-arm syndrome.

Pain in the Shoulder and Arm. Painful syndromes involving the shoulder and arm, associated with arthritis, or with specific avocations or occupations such as tennis playing or telegraphy, do not follow a nerve or root distribution and are, rather, experienced as diffuse muscular or joint pains.

Causalgia. Causalgia is a painful syndrome which was defined by Kirklin, Chenoweth and Murphy⁴ in 1947 as "a clinical syndrome associated with a lesion of a peripheral nerve containing sensory fibers, manifested by pain in the affected extremity; this pain is usually of a burning character and is usually located in an area corresponding in general to the cutaneous distribution of the involved nerve." Little difficulty is encountered in the diagnosis of this condition, in view of the fact that it frequently is associated with trophic changes. The skin is thin and may be either pale or red, dry or moist. The bone may atrophy; the nails may become brittle. The syndrome generally

arises from seemingly minor damage to the involved nerve not sufficient to cause motor or sensory loss. The condition known as "causalgia" is always distressing and painful. Treatment consists of interruption of the sympathetic supply to the part affected.

Intercostal Neuralgia. Intercostal neuralgia consists of pain in the thorax along the distribution of the intercostal nerves. The pain may be dull and aching or sharp and burning. Tenderness along the points of emergence of the primary branches of the intercostal nerves often is associated. Intercostal neuralgia may be confused with conditions such as pleurisy or angina, in which the pain is not strictly segmental. The more common conditions associated with true intercostal pain are fractured ribs, intraspinal tumors, protruded intervertebral disks, primary tumors of the ribs or vertebrae, metastatic tumors, injury to the nerves after thoracentesis and herpes zoster. When the pain along the distribution of the intercostal nerves can be relieved diagnostically by the paravertebral injection of procaine hydrochloride, nerve section, or posterior rhizotomy, may be necessary for relief.

INFECTIOUS POLYNEURITIDES

In the differential diagnosis of any of the pain syndromes, the infectious polyneuritides must be considered. Serum neuritis may come on after the injection of serum. This usually occurs within 2 to 3 days, and is associated with a palsy.

PAIN IN THE LUMBAR AREA

Lumbar plexus pain syndromes may be associated with any lesion involving the nerves of the lumbar plexus. Intraspinal tumors or protruded intervertebral disks, when they occur, commonly do so in the lumbar region from the first to the fifth lumbar vertebrae and should always be suspected when there is pain in this region. Intraspinal tumors may cause pain which masquerades as lumbosacral pain many years before these tumors manifest themselves in any other way. The pain of myositis or back

strain does not follow a nerve-root distribution.

A persistent pain syndrome referable to the nerves of the lumbar plexus may require spinal puncture, with manometric studies and determination of the cell and protein content of the cerebrospinal fluid. These diagnostic procedures may or may not be followed by, or be done in conjunction with, contrast studies such as air or oil myelography, as the case indicates.

PAIN IN THE THIGH

Nerves originating in the lumbar plexus have been associated with painful syndromes. Obturator pain extends along the inner side of the thigh toward the medial condyle, following the sensory distribution of the obturator nerve. Crural pain follows the course of the sensory branch of the femoral nerve on the inner and anterior portions of the thigh and knee. Meralgia paresthetica is characterized by numbness, tingling and pain in the distribution of the lateral femoral cutaneous nerve of the thigh.

THE SYNDROME OF SCIATIC PAIN AND CONDITIONS WHICH SIMULATE IT

The sciatic pain syndrome consists of any pain which follows the distribution of the sciatic nerve. The sciatic nerve and its components probably are more frequently involved in painful syndromes than is any other nerve in the body. Current opinion holds that it is extremely doubtful that such a condition as primary neuralgia of the sciatic nerve exists, because pain along the course, or in any portion of the distribution, of the sciatic nerve in all likelihood is due to mechanical disturbance of one of the roots making up the component nerves or to direct involvement of the nerve itself. Intraspinal lesions and pelvic tumors compressing any one of the component parts of the lumbosacral plexus, as well as tumors along the distribution of the nerve root, may cause the sciatic pain syndrome.

When this syndrome is present, the pain occurs low in the back, and extends down across the buttocks, along the posterior as-

pect of the thigh to the outer half of the calf of the leg and foot. The origin of the pain which courses down the posterior aspect of the thigh, calf and foot will vary according to the nerve root or roots that are involved. A history of trauma such as that incurred in lifting, falling on the buttocks or stepping unexpectedly from a curb or into a depression may be elicited. Aggravation by cough, sneeze and strain or by forward bending is typical of the root pain caused by an intraspinal lesion.

Results of neurologic examination may be entirely negative, with the exception of absence of the ankle jerk. If this sign cannot be elicited, it frequently indicates a protruded intervertebral disk in the lumbosacral area or at the fourth or fifth lumbar interspace. Absence of the patellar reflex indicates involvement of the third lumbar root. In cases of long-standing distress of this sort, there may be some muscular atrophy of the posterior aspect of the calf and weakness in the range of motion of the muscles.

Roentgenologic examination of the lumbar and lumbosacral regions of the spinal column is necessary because, although the roentgenogram may disclose nothing abnormal, certain changes of the bone such as lumbar scoliosis, hypertrophic changes, a flattening of the normal lumbar curve and spondylolisthesis may explain, in part, the involvement of the nerve roots.

Lumbar puncture may be done without the use of contrast media when protruded intervertebral disks are suspected. The value for protein in the cerebrospinal fluid in the presence of a protruded disk usually is slightly elevated, occasionally more than 40, and rarely up to 100, mg. of protein per 100 cc. of fluid. In cases in which tumor of the spinal cord is present, fluid block is more likely to be noted during manometric studies, and the content of protein is likely to be greater than 100 mg. per 100 cc.

The treatment of the sciatic pain syndrome depends on the underlying pathologic condition. If a tumor of the spinal cord is causing the pain, it must be removed. If the cause of the pain proves to be a protruded

intervertebral disk, this must be removed. When there is definite evidence of changes in the bony processes of the lumbar vertebrae, fusion should be considered in conjunction with removal of the protruded intervertebral disk.

Intrapelvic tumors may press against the lumbosacral plexus and produce a sciatic type of extension of pain. Diabetic neuritis and locomotor ataxia frequently cause severe pain in the leg. Primary tumors of the sciatic nerve may produce pain.

In all cases of sciatic malfunction, the course of the sciatic nerve should be carefully palpated. Arthritis of the hip, since it may extend down to the knee, occasionally may be confused with sciatic neuralgia or sciatic pain. The marked aggravation of pain by maneuvers involving motion at the hip, without increased tension on the sciatic nerve, serves to establish the differential diagnosis. Postural disturbances frequently produce severe pain in the lower part of the back, but rarely, if ever, do they produce the typical sciatic extension of the pain.

If it is present, intermittent claudication of Buerger's disease or arteriosclerosis obliterans will be evident from the history and the obvious vascular insufficiency. The severe pain of metastatic lesions to the bones of the lower extremities may be confused with the pain of sciatica, especially if the pain is in the leg as well as the lower part of the back, but roentgenologic and other evidence of the underlying pathologic condition will serve to distinguish these conditions.

PUDENDAL PAIN SYNDROMES

Painful conditions of the male and female perineum often are referred to as pudendal pain syndromes. These include testicular pain, vaginal pain, anoperineal pain and coccygeal pain. Frequently no cause can be found for these conditions, but a search always should be made for sacral tumors or tumors involving the conus after local conditions such as fissures and perirectal abscesses have been excluded.

Coccygodynia, a painful condition of the coccyx, may follow a fall on the tip of the

coccyx. If this structure has been injured, manipulation of the coccyx with one finger in the patient's rectum may produce exquisite pain. Coccygodynia frequently is found in neurotic women. It stubbornly resists all forms of treatment, including psychotherapy.

PAINFUL SYNDROMES OF INTRASPINAL TUMORS

Painful syndromes caused by intraspinal tumor may persist for years. In reviewing a certain series of records of patients who were relieved of disabling pain and disability by surgical removal of an intraspinal tumor, it was extremely interesting to note the many problems of general medicine and surgery that had been involved. These problems had continually presented themselves during the development of the symptoms and before a correct diagnosis could be made. The usual pain of an intraspinal lesion may precede any other symptom by months or years. This pain may be constant or intermittent. Its chief characteristics are that it occurs when the patient is at rest and that it is relieved by exercise. The character of the pain is almost pathognomonic of the condition, since the pain persists in a localized area and extends over the same nerve roots. As a rule it is lancinating, and, as I have said, it is aggravated by straining during bowel movement, coughing, sneezing and lifting. The pain invariably awakens the patient 4 to 6 hours after he has retired. It often becomes so severe as to compel the patient to walk the floor or to sleep in a sitting position. Unfortunately, many patients with such a lesion are treated for neuritis, muscular rheumatism or syphilis; some even have been called "hysterical."

When an intraspinal lesion is present, one of the most important considerations is that it may be associated with a constitutional disorder. For this reason a complete examination should be made and it should include the usual studies of the blood and urine. The Wassermann test and other serologic tests, if they are indicated, should be done. Roentgenograms have been of value in localizing intraspinal tumors in about 60 per cent of

the cases, and for this reason good roentgenograms of the vertebral column and thorax should be made. A complete neurologic examination is necessary, for some small and apparently insignificant change in motor, sensory or reflex power may be of extreme importance in the differential diagnosis. Examination of the cerebrospinal fluid is imperative, for not only are the physical characteristics of the fluid important, but the chemical and serologic changes may be the clues to the correct diagnosis. An increase in the content of protein or in the number of cells, a yellow color of the fluid, changes in intraspinal pressure and the response to changes of intracranial pressure, and especially the response to compression of the jugular veins, all should be noted. Iophendylate myelograms should be made in all cases of suspected intraspinal tumor.

A number of years ago we learned that the late removal of benign intraspinal tumors will relieve the painful syndrome, but will not relieve the associated paralysis. The mortality rate in such cases was so low that post-mortem specimens were rare and hence did not aid in explaining this fact. A series of animal experiments was carried out whereby tumors were placed in the spinal canal and allowed to remain for varying intervals, during which the changes in the condition of the lower extremities were noted. By making careful clinical and postmortem observations, we were able to show that certain degenerative changes, consisting of death and liquefaction of the cells, take place after long-continued compression of the spinal cord. These changes result in permanent paralysis. On the basis of our experiments, we could demonstrate that early operation is necessary if normal motor and sensory recovery is to be expected.

SURGICAL RELIEF OF PAINFUL SYNDROMES

Up to this point, we have said little about surgical procedures for the relief of painful syndromes. Actually, these procedures are fairly well standardized, and it is much more important to identify the syndrome first and then to apply surgical correction than it is

to become preoccupied primarily with surgical details.

Relief of the neuralgias has been referred to in the descriptive analysis of the pain. This relief is achieved by the injection of alcohol and by sectioning of the nerve in trigeminal neuralgia, by intracranial division of the nerve in glossopharyngeal neuralgia and by intraspinal division of the three upper cervical nerves in occipital neuralgia.

Intraspinal tumors and intervertebral disks should be removed.

Operations upon the central nervous system have been designed to destroy certain areas within the brain and to section certain pain tracts in the spinal cord and nerves. Surgical judgment as to the application of these procedures is most important, for once the structures concerned have been attacked surgically, there can be no restoration to normal if the relief of pain is not complete. In such an instance the patient would be left with not only the pain but also numbness and paresthesia.

Resection of portions of the sensory cortex, prefrontal lobotomy and tractotomy are the operations upon the brain and brain stem. In selected cases they are most efficacious in their relief of pain.

Removal of the pituitary gland has been done for patients with disseminated cancer, and in some cases this operation will provide relief of pain that is most gratifying.

Chordotomy, or the operation for intraspinal division of the sensory tracts in the spinal cord, can change a painridden, miserable patient suffering from either cancer or intractable pain of undetermined origin into one who ends his days in peace and comfort without being drugged and stuporous.

Rhizotomy, or division of the sensory components of the spinal nerves, may relieve intercostal pain or pain extending along the peripheral branches of the nerves. In the treatment of painful areas in the distal periphery, division of sensory nerves sometimes can relieve a severe, painful syndrome.

The intraspinal injection of alcohol has been employed in selected cases, and when properly carried out, both technically and

judiciously, it may bring surprising relief.

Of immense value in the analysis of pain syndromes and in attempts to apply the proper surgical procedure is the well-placed injection of procaine hydrochloride. The actual injection discloses information about the pain threshold, the patient's reaction to his pain problem and, most important, the achievement or failure to achieve temporary relief of pain. It is always wise to inject the agent on one day and to see the patient again the next day, a plan which will help to evaluate the effect of the injection. As experience increases, it usually will be possible to analyze the pain problem and to apply the proper surgical procedure.

SUMMARY

Painful syndromes represent a challenge to the entire medical profession. They comprise a very definite category of pain problems, and should be kept in mind when a differential diagnosis is being made.

In the analysis of painful syndromes, a very carefully elicited history is of paramount importance. From the story which the patient gives with regard to his pain may develop certain trends which may lead to a definite diagnosis.

Certain painful syndromes have a very definite pattern which is sometimes difficult to construct on the basis of the patient's story. After a carefully taken history, a complete neurologic examination may assist in arrival at a definite diagnosis.

Treatment varies with the nature of the painful syndrome. It consists of elimination of irritating factors and division of painful tracts in the brain, spinal cord and nerves. Neurophysiologic studies have been greatly assisted by experimental studies on certain animals. By the results of these studies, lives have been saved, cripples have been rehabilitated and painful syndromes have been relieved.

CONCLUSION

In our consideration of painful syndromes we have perhaps managed to acquire some conception of how vast the general problem

is. Unquestionably, the store of facts which we possess now will be changed as increasing knowledge in this largely uncharted field discloses what is presently obscure to us and as the therapeutic attack enlarges, as it inevitably must. For my own part, impressive as such advances of the future are bound to be in an area opened only comparatively recently to the ministrations of the clinician and the surgeon, as well as animal physiologic studies, I hope we shall never be satisfied with them. To surrender to complacency and to turn aside from the incessant task of propagating surcease from pain would be a most cruel denial of the indomitable spirit

of inquiry and the resolute industry of George M. Kober.

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MEMORABLE DATES IN THE HISTORY OF POLIOMYELITIS

- 1890 O. Medin established that poliomyelitis is contagious.
- 1909 K. Landsteiner showed that poliomyelitis is caused by virus and is transmissible to monkeys.
- 1949 J. Enders, T. Weller and F. Robbins discovered that polio virus can be cultivated on different explanted tissues (they received the 1954 Nobel Prize for the discovery).
- 1951 Dorothy Horstman & D. Bodian proved that polio virus moves in the bloodstream of monkeys.
- 1951 Three different types of the polio virus were distinguished.
- 1952 W. MacHammon discovered the protecting effect of gamma globulin against poliomyelitis.
- 1955 Successful preventive immunization with the polyvalent vaccine of Salk was publicly announced in Ann Arbor.

Vaccinate Against Polio—NOW

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Military Medical Problems in Britain Today

By

LIEUTENANT GENERAL SIR ALEXANDER DRUMMOND, K.B.E., C.G., Q.H.S., F.R.C.S., D.L.O.
Director of the Medical Services of the British Army

GENERAL HAYS, may I through your good offices take this opportunity to thank Mr. Wilber Brucker, the Secretary of the Army, for his generous invitation to visit this great federation of freedom loving peoples. It is an honour that not only I but also the Services I represent, deeply appreciate.

General Hays, General Heaton and Officers of the United States Army Medical Corps and Service, it is a great privilege to be invited to speak to you at the Walter Reed Army Medical Center.

Walter Reed was and always will remain a great man. Throughout his life he stood for the best in medicine; there is not one of us who is not uplifted by the thought of his work and attainments. It is therefore very natural that the Medical Services of the British Army should hold in esteem your great pioneer in tropical medicine and bacteriology.

To Walter Reed and to those who have followed him the ovation of Pericles is most fitting:—

"They received, each for his own memory, praise that will never die, and with it, the grandest of all sepulchres, not that in which their mortal remains are laid, but a home in the minds of men, where their glory remains ever fresh, to stir to speech or action, as occasion comes by. For the whole earth is a sepulchre of famous men, and their glory is graven not only on stone over their native land, but lives on, far away, without visible symbol, woven into the stuff of men's lives."

In the Walter Reed Army Medical Center

Delivered May 16, 1957 at the Surgeon General's Monthly Medical Conference, Sternberg Auditorium, Walter Reed Army Medical Center, Washington, D.C.



U. S. Army Photo

LT. GEN. SIR ALEXANDER DRUMMOND

you have achieved not only an architectural memorial but also a living centre, a heritage from which you will continue to weave stuff into men's lives.

Before leaving the United Kingdom I was asked to give Greetings from the President of the Royal College of Surgeons of England, Sir Harry Platt, a staunch supporter of the United States. Sir Gordon Gordon Taylor, the greatest of our classical surgeons, who has endeared himself to all on both sides of the Atlantic, wrote the following letter to me:

"I wonder if I might dare to ask you to convey a message of greetings from myself to the surgeons whom you may meet. In the past I have received such kindness from the U. S. Government as well as U. S. surgeons and I am immensely proud of my Legion of Merit as well as my Honorary Fellowship of the American College of Surgeons, my Hon. Membership of 'The Americal Surgical' as

well as my Honorary Membership of the Society of Medical Consultants to the Armed Forces.

"These honours which the United States has loaded upon me serve to remind me, if reminders were indeed necessary, of my many friends in the United States, for they have been comrades-in-arms of mine in two global wars.

"Many have now passed on: Cushing, Brewer, Elliott Cutler, but I have firm friends still amongst you—Generals Paul Hawley, Rorden, and Kirk, and many others with an attachment to the Armed Forces. To one and all I send you my good wishes. Despite our separation by the Atlantic, it is well to remember that 'blood is thicker than water' and that 'in unity there is strength.'"

Gentlemen, recently, statesmen of our two Nations have been laying stress on the importance of not taking each other for granted. In our spheres the best means of overcoming this stumbling block is to get to know each other's difficulties and the reasoning behind any unfamiliar methods we may employ.

My talk, I trust, will give you an insight into some of our problems and the way we are planning for the future.

MEDICAL COVER

The provision of medical cover for service personnel and their dependants is an ever changing administrative and professional problem.

In the United Kingdom the First Lord of the Admiralty, the Secretaries of State for War and for Air and the Minister of Health are each responsible to Parliament for a Medical Service. That of the Minister of Health is called the National Health Service.

At home and overseas among the three defence services the service which is the major user is normally responsible for providing the hospital medical cover. For example, although there are Royal Air Force medical officers and sick quarters in Hong Kong the hospitalization of their personnel and dependants, is undertaken by the Army who operate two of the three service hospitals.

In Malta there is a different system. The Royal Navy hospital at Bighi provides surgical and medical cover for the home based personnel and dependants of the Services, while the two Army hospitals cover the maternity, paediatrics and also the medical and surgical care of the locally enlisted personnel.

In Aden, the Royal Air Force, the major user, undertakes the hospital medical cover of all three Services.

In the United Kingdom a large proportion of army dependants are under the care of the general practitioners of the National Health Service. This means that the father is under the care of an Army medical officer while his wife and children are under the care of a civilian practitioner. This break up of the family or social-medical group is not liked. It was introduced during the last war as an economic measure to meet the shortage of doctors and cover the wide dispersion of the troops and their families.

Hospitalization may be in a military, Royal Air Force or National Health Service hospital. As yet the Royal Naval Medical Service does not undertake the care of families in the United Kingdom.

In addition there is a reciprocity with the National Health Service by which patients of Military and Royal Air Force hospitals are accepted in civilian hospitals and vice versa. The reference General Hospital of the Army Medical Services is The Queen Alexandra Military Hospital, Millbank. Geographically it is in the centre of the medical world of London.

The method of providing medical cover no doubt appears to be a complex affair, being built up from a number of compromises.

The task of the Medical Services of the Army is the provision of a comprehensive service for its personnel and their dependants both at home and overseas, and where practicable, at a standard at least as good as that provided by the National Health Service in their better general practices and hospitals.

In the provision of medical cover there are three problems to be dealt with—overseas service, maintenance of standards and agency

cover, that is, getting another organization to undertake the commitment.

Overseas service is not new, we have for many generations been engaged in it. The complication today is that it must be tongued and grooved into the career guidance scheme which affects the normal foreign service roster.

Professional standards are the problem of first importance. They cannot be maintained by the issuing of directives or the distribution of publications. Therefore today postgraduate refresher courses and career guidance schemes are essentials.

Agency medical cover can be dismissed as more or less an administrative problem.

THE MAINTENANCE OF PROFESSIONAL AND TECHNICAL STANDARDS

After each major war, it has become almost traditional for the British Government to set up a select committee to reshape its Army Medical Services. The recommendations of all these committees invariably include schemes for improving conditions of service and of enhancing the professional or clinical standing of the members of the Army Medical Services. The last Committee—The Waverley Committee—in 1956, among other things, recommended that the other services should bring the professional standards required by their specialists into conformity with those laid down by the Army. This recognition of our professional standards was very gratifying, not only to members of the Medical Services of the Army, but also to our civilian colleagues who ever since the formation of the regular army (1660) have gone out of their way to encourage and help us in raising our standards.

For some time it has been necessary that senior specialists in the Royal Army Medical and Dental Corps hold the high academic qualification of their specialities and have the requisite training and the experience recommended by the Royal Colleges and the Joint Consultants' Committee of the British Medical Association. In 1947, in order to attain these standards a career guidance scheme was laid down.

Today 40% of our officers are specializing. Before grading as a specialist the candidate is interviewed by a board consisting mainly of leading civilian consultants, who assess his qualifications and experience and if they equate with those of a civilian consultant, recommend that the candidate should be graded and appointed as a specialist in the Army. The board then recommends that he be posted to a particular unit for a tour of duty. This system is identical with civilian procedure.

At present no fewer than 36% of our regular officers hold postgraduate or higher medical qualifications—a greater proportion than is found in civilian life.

Although the career guidance scheme is normally confined to regular and short service officers I am happy to say that a large number of our National Service officers also benefit.

Before being permitted to train as specialists it is considered advantageous for officers to have completed in civilian hospitals two out of the three recognised hospital appointments as residents as required for their particular specialty. They have also to pass satisfactorily the Junior Course of the Royal Army Medical College, the subjects of which are military surgery, medicine, Army health, pathology and psychiatry.

If selected the candidate at an appropriate time is sent on a three months' surgical basic science course, or membership course for the examination of the Royal College of Physicians. If successful the surgical aspirant studies for the final Fellowship examination while the new Member of the Royal College of Physicians works for his doctorate.

Postgraduate training is coordinated by the Council of the Royal Army Medical College under the Chairmanship of the Commandant, who is a Major-General and the Director of Studies. To ensure success a very close liaison is needed with the personnel branch of the Army Medical Directorate in order to select suitable assignments for the candidates.

In the case of the general duty medical officer a medical course is provided at the

Cambridge Military Hospital, Aldershot, on the ground that it is far better to chip off the rust in our own backyard than in front of students at a training hospital. There is no difficulty in placing our junior specialists in Registrars' or Residents' posts in teaching hospitals of the United Kingdom. The difficulty occurs when one wishes to place a senior specialist in a consulting post. This difficulty to date has not been resolved because consultant posts in civil hospitals are under the control of the Hospital and Regional Authorities and not the National Health Service or the Minister of Health.

A refresher course in medical subjects is considered necessary for all officers, specialist and non-specialist, returning from overseas.

Theoretically, the career guidance scheme is simple and few difficulties are encountered with the unmarried officer. When a difficulty arises it usually concerns the married officer's family which very rightly must be considered. The career guidance staff are constantly reminded that one of the first principles of the service is to maintain a happy community and this involves focussing on the family. To this end in selecting officers for regular commissions special attention is now paid to their family background.

QUEEN ALEXANDRA'S ROYAL ARMY NURSING CORPS

Postgraduate nurse training is developing in Britain and every opportunity is being taken to keep our nursing officers abreast of modern nursing and medicine.

The majority of the other ranks or enlisted women are student or probationer nurses. In 1950 when their corps became open to other ranks the main difficulty arose because the recruits had to be enlisted as private soldiers and were given the schedule accommodation. Since then vast strides have been made and their accommodation and messing are being brought into line with the best in civilian life.

These young women, if educationally suitable, are indexed and trained directly for the State Registered Nurses certificate. Those who are not so proficient are helped with

their education by the Royal Army Educational Corps and at the same time progress towards the same goal through the medium of the original Army nursing examination scheme.

The training period for qualification of these student nurses is approximately four years, the same as in civilian life, after which the majority pass into the limbo of married life. Even so their training, it should be remembered, is by no means lost. A good proportion marry into the Army and automatically take their place in the regimental welfare organisations.

The importance of these student nurses cannot be overestimated.

The criterion, the better the student nurse, the better the standard of the hospital, applies equally to military as to civilian hospitals.

A military hospital without female nurses is an anathema and is not to be countenanced. The first assignment of British Army nurses was sent to the Egyptian Campaign of 1882. In his dispatches the Commander-in-Chief reported "I do not think that anyone who has seen the beneficial effect of their presence will ever consider a hospital complete without them."

Recruiting of the officers and other ranks of the Queen Alexandra's Royal Army Nursing Corps is steadily improving. That this is so despite the many counter attractions of civilian life is encouraging. In the British Army the Corps have a great tradition. They follow Florence Nightingale, the founder of the Army Nursing Service, who wrote "I would rather have to do with the Army generally than with any other class I have attempted to serve."

The Sisters and nurses of the British Army today are imbued with the same spirit of vocation.

TECHNICIANS OR CORPSMEN SPECIALISTS

The career guidance of our other rank technicians is the concern of the Technical Training Officer and the Senior Sister or Nurse Tutor. They ensure that service training is related to the appropriate civilian quali-

fication. Until another rank has qualified in his trade, there is a Progress Report submitted regularly to these training officers.

On return from overseas each regular soldier is interviewed by the Technical Training Officer or the Senior Sister Tutor and is given guidance for his future career.

Despite the fact that our technicians have no difficulty in finding good civilian posts on their transfer to the reserve, it is of interest to note that the number of seniors who extend their service is high.

Medically the Suez operation was an important Exercise. A great deal was learnt, in fact, surgically a lot had to be relearnt. It has certainly given us guidance for the future.

During the planning stage it was decided that casualties occurring in the first phase of the landing would be ferried direct to the ships until such time as the medical units had been disembarked. On the outward voyage, aircraft carriers of the Royal Navy and military transports, carried the striking force. Consequently the public rooms of these vessels which were to be converted into wards, operating theatres and sterilising rooms could not be prepared and organised for their medical role until the disembarkation of the troops was well under way.

In these circumstances the normal practice that the surgical teams and the medical personnel concerned prepare the dressings and undertake their sterilisation was not feasible. Instead made up swabs and dressings were supplied. Instructions were given to the Cambridge Military Hospital, Aldershot, to pack and sterilise all dressings, gloves, gowns, theatre linen and syringes to cover the requirements of the military units both afloat and on the beach for the first phase, say a period of 3 to 4 days. In other words the Cambridge Military Hospital, which normally provides the medical units of the Aldershot area with sterile syringes and supplies, on this occasion extended its supply service to cover the Mediterranean operation.

It is of interest to note that among other things the forward surgeons of the First World War recommended that it was advisable in future to issue to field ambulances etc., sterile dressings packed in parcels of three different sizes.

This 1956 innovation was highly successful and a plan is in hand to ensure that all dressings etc. of mobilised field units will in future be sterile and carried in special packs.

SURGICAL ASPECTS

The smooth running of medical units depends largely upon the presence of a team spirit among its clinicians, chiefly, may I say, the surgeons. The members of the surgical teams mobilized for the Suez operation had been drawn from the Active Army and Reserves in all parts of the United Kingdom.

Prior to embarkation, in order to develop a team spirit, the personnel were posted to static hospitals where they took over the surgical practice. This enabled them to work together and so get to know each other's idiosyncrasies. This opportunity to settle-in paid dividends. In fact, we have now gone further; personnel of static hospitals are being trained, as described later, to form a medical company to which three or more surgical teams are attached. When required the company plus its surgical teams will be withdrawn to act as a self-contained unit or be grouped to form an evacuation or even a general hospital.

MILITARY SURGERY

After every campaign, the importance of military surgery as opposed to its civilian practice, has been stressed. During the Napoleonic Wars the necessity to study military surgery warranted the appointment in 1806 of a Regius Professor of Military Surgery in the University of Edinburgh. In point of fact it was the original Chair of Surgery. Its occupant in 1843, Sir George Ballinghall, addressed himself to the then Prime Minister of the United Kingdom, requesting that similar chairs be established in London and in Dublin. Today the only Professorship of Military Surgery in the United

Kingdom is in the Royal Army Medical College, London.

It is salutary to note that in this operation some medical officers neglected the cardinal principle of Military Surgery, that is, never to undertake the primary suture of a wound received in battle. Delayed primary suture for many years has been the established rule whether or not antibiotics are used. Frankly, the temptation to close a wound and allow it to heal by first intention was great. Time was on the Surgeon's side and antibiotics at his call: Had not some of the troops been flown from their transport, landed on the beach, joined in the fight, been wounded, flown back as casualties and were now lying comfortably as patients in the ship's hospital all within twenty minutes?

Helicopters are wonderful time savers but speed and antibiotics are not the alternative to the art of debridement. Unfortunately it was forgotten that the missile passing through tissues still retains its disruptive and damaging effect and its tract must be followed up.

The lesson of the 1914-18 or Great War was forward surgery, that of the second or World War, delayed primary suture. It was found that if wounds were treated as directed 90% of them could be sutured in five days with an excellent prospect of primary union in 90% of cases.

In the best interests of his patient the competent and experienced forward surgeon knows that his job is to prepare the patient's wound for a delayed suture in 5 or 6 days time. If he does this adequately, experience shows that massive scar tissue is eliminated, compound fractures are converted into simple ones and sinus formation prevented. In fact the forward surgeon if he carries out his allotted task, is the chief means of restoring his patient to fighting fitness in the minimum of time.

There are but *five* general principles to learn in wound treatment:

- (1) *Debridement.* The removal of all dead and devitalized tissue, the blood supply of which is so precarious as to render it the prey of bacterial infection.
- (2) *Opening up* the wound in order to remove foreign bodies, blood clot and to control haemorrhage.
- (3) *Relieving tension* by excising fascial compartments and so establishing free drainage.
- (4) *Packing.* Under no circumstances pack a wound and then close it.
- (5) Extensive wounds of muscle, like fractures, must be supported or splinted, otherwise the patients fare badly.

Why in some cases was the important principle of military surgery, namely, delayed primary suture neglected? Was it due to the present day spirit of independence or to lack of basic knowledge? Whatever the cause it resulted in a dis-service to the patients.

In an overseas expedition no matter how small the force, it is, I feel, essential to have a senior and battle experienced surgeon present from the beginning. Because if a principle is to be disregarded and if we are to maintain progress the occasion to investigate other methods will arise, it is essential that it should be done after due consideration under suitable conditions and under the guidance of a well tried and competent group of surgeons.

BLOOD

Blood was plentiful, and casualties were comparatively few. There was no restraint on the use of blood. It was reported that one patient had over 15 pints, despite which he died. In War, blood will be difficult to obtain. If given too generously, it is likely to do the patient harm and reduce the amount available for the more needy, say your friend, the patient, three up in the queue.

The idea that blood will be obtained on the hoof is unrealistic for example, in the Suez operation the company of an aircraft carrier was bled. If this had been real war it could not possibly have happened.

ARMY HEALTH

Experience in the Second World War proved that the principles of hygiene applied as field sanitation produced results to the benefit and safety of the troops. Suez

showed us that the practical importance of sanitation needs constant emphasis at all levels and to individuals as well as units.

The operation in its final and static phases showed how a force may be beset by the enemy (literally) from within in the form of bowel diseases and from without by lesions of the skin and the despised and old fashioned louse.

A Field Hygiene Section (one non-medical officer, 8 hygiene inspectors and some craftsmen), highly trained and self contained, proved invaluable executively in large scale sanitary measures and by precept and example in helping units to overcome their own problems.

VENEREAL DISEASE

It will astonish you to learn that there was but one case in the whole force which landed in Egypt. The reason was simple. Morale was excellent. The troops had plenty of work to do. In fact there was no time for idleness or mischief.

THE BUILD UP OF THE NEW ORGANISATION OF MEDICAL UNITS OF THE BRITISH ARMY

In this rapidly changing world scientific development is outstripping all other forms of progress, yet the task of the medical services, namely, the reduction of manpower wastage, remains the same.

In modern warfare, mass casualties will occur within the space of a few seconds and, simultaneously, at different depths in the theatre.

In the first World War of 1914-1918 our predecessors dealt successfully with mass casualties but today the balance between medical potential and the casualty load has been rudely upset. The immediate and urgent problem is for us medical men to show the way to adjust this balance.

The British Army Medical Services have been tackling this problem and have, I feel, made progress. In warfare today using the conventional means of collecting and treating casualties, the Medical Services will be swamped and over-run by two forces, first, the masses of casualties themselves and per-

haps secondly, the enemy in his follow up.

Therefore, until reinforcements can arrive and be deployed, it is vital that every man who can handle his arms, should be *conditioned* to stand firm at his post.

Only the serious injuries should be referred back to the regimental aid post. Moderate wounds and burns must be treated by the individual himself at the place of receipt of the injury, or if necessary and when available by the injured man's comrades. To meet this new requirement it was found necessary to train all service personnel in First Aid. Experience shows that good first aid given to the more seriously wounded will so relieve the pressure on the medical services that the medical officer and his assistants are not diverted from the vital measures necessary for saving the critically injured. The standard of Army First Aid is high, but is not academic. The soldier First Aider is not required to know the name of a single artery or bone. Sound practical knowledge and commonsense are all that are needed.

Let me give you three examples of life saving first aid from Malaya. To repel an ambush a party, including a regimental cook, was hastily gathered together. On arriving at the scene of the fighting a soldier sitting in a truck was shot by a single bullet through both thighs. The left thigh was pulped and two inches of the external iliac and saphenous veins destroyed. The casualty was dragged into a ditch where the cook flexed the bleeding thigh on the man's abdomen and told him to hold it up hard. As there was a danger of the party being over-run the cook joined in with the fighting. During a lull he returned to his patient, teased open a shell dressing, packed the gauze firmly into the wound and so successfully stopped the bleeding.

Again a Rifleman on a night patrol was caught in the barbed wire. He was shot through his left leg and his anterior tibial vessels were destroyed. While in the wire his companion opened up a first field dressing and firmly packed the gauze into the wound so stopping the haemorrhage.

Finally there is the case of a gunner who

received a crushed chest injury complicated by a large sucking wound. The wound into the pleura was closed with a teased out shell dressing. He was transported by hand and light car some five miles to a hospital unit and is alive today.

This standard of first aid is becoming well established. We are confident that as a result of this training, the number of casualties requiring urgent medical assistance will be considerably reduced. To compete with the time and space factors the reorganisation of the Medical Services themselves became a pressing necessity. The salient point in the reorganisation was the provision of a flexible, mobile and elastic reserve to cover an incident, or group of incidents. In other words the reserve units must be capable of moving to the sites of the catastrophes and of collecting, filtering, sorting or holding patients.

The first reorganising scheme was designed to meet the requirements of a type division. Doubt as to its capabilities arose owing to the necessity of lateral as opposed to vertical control. In addition the basic nursing standards required assessment.

The object of a medical unit is the care of patients, it must therefore be given a definite commitment. An arbitrary figure of 100 patients was chosen and it was stipulated that they would be seriously or dangerously ill. It was judged that at the appropriate time there would be insufficient surgeons on hand and it would be impossible to give all the patients definitive treatment within say 6 or even 96 hours of their admission. Consequently it must be accepted that some of the patients would have to be given sustaining treatment in order to meet the lack of surgical skill.

If at the time of a nuclear incident only one surgical team per 100 cases was available, experience of the Great War showed that it would take 8 days to complete the task. Nevertheless field and other exercises suggest that if priorities are made and the patients given sustaining treatment there is no reason why the majority of the 100 patients should not be efficiently treated within

this eight day period without reducing the medical standard of treatment.

The minimum staff found necessary for the sustaining care of 100 patients was: medical officers 3, nursing officers or state registered nurses 6, nursing orderlies 37, and cooks, a total of 49.

This is a self contained medical company capable of existing for up to 8 days on its own. The aim of its staff is to admit and bed down 100 seriously ill patients, initiate their routine sustaining treatment, which may be suction, drips, sedation, antibiotics, and have within ninety minutes a quiet well organised ward ready for the medical officer to do his round and assess the priorities of his patients.

Practice shows that a 100 bedded company on site can be opened up and functioning within one and a half hours which time allows for erecting tentage, laying out the beds, preparing a suitable diet and boring a latrine, etc.

I am greatly indebted to General Hays for his advice and guidance as to the level to which these staffs must be trained. Last year he told us that to deal effectively with mass casualties the other rank personnel would have to be trained up to sub-professional standards. This, in the new prototype companies, is being achieved. A syllabus to cover the new training has been drawn up, and in future it is proposed that every nursing orderly must be proficient in this applied training before he is promoted into his next substantive rank.

The training includes the survey of the ground for erecting tents or of a building so as to plan the optimum sites of the wards and the beds, and methods of reception and estimation of the degree of shock of a patient.

The 100 bedded medical company is made up of three sections, each capable of running a 32 or 36 bedded ward or, if necessary, forming the casualty collecting post of a field ambulance. We consider that the training of the nursing orderlies for either role is identical. The new unit formation provides a very close officer, other rank or enlisted man re-

relationship which is vital for responsible team work.

The medical company is to become an integral part of our static and field medical units. The future general hospital will consist of an administrative headquarters and 4, 6, 8 or 10 hundred bedded medical companies plus the necessary surgical and medical teams and the ancillary departments, all of which are attached to the headquarters.

The new casualty collecting station or evacuation hospital (500 beds) is built up on an identical plan. The field dressing station is simply an administrative headquarters plus two medical companies. If dealing with psychiatric casualties it will have a psychiatric unit attached to the headquarters.

It is proposed that in the field ambulance the advanced dressing station will be a 100 bedded medical company, its three sections forming the reception, resuscitation and evacuation departments. The collecting company is also basically a 100 bedded medical company each of its three sections working as a casualty collecting post.

There is now a basic element—a 100 bedded medical company—throughout all static and field medical units. In general hospitals the equipment includes beds, while in the forward units stretchers only are provided. One visualises a 600 bedded hospital consisting of six companies, restricted to 400 beds and an evacuating hospital, 5 companies, restricted to 300 beds, the equipment, tentage etc. of the other two companies being packed on wheels and ready to move. When required the personnel of these companies is withdrawn from the parent unit.

It is considered that such an arrangement will provide a well trained, flexible and mobile reserve, further it is economical in manpower and equipment.

The prototype companies have proved themselves efficient and in describing them I would like to borrow an American slogan and say they now "work smarter not harder."

CIVIL DEFENCE

Civil defence in Great Britain is organised into three echelons, the first comprising

the police, the fire brigade and the civil defence workers. The second is formed by companies of the mobile defence corps which are military or Royal Air Force units specially trained for rescue and ambulance work. The third echelon is made up of all service personnel and units in the United Kingdom at the time of the incident and these will all come under military command.

Military effort is best directed to the task which civilians will find difficult. It should be remembered that the strength of military forces lies in the fact that they work as uniformed and disciplined bodies, and as such, raise the standard of morale. Speed, elasticity and flexibility are their other assets. If they are dispersed in penny packets their potential is lost.

Obviously, the strength of a military medical effort is dependent upon the number of units at hand and their location. The help that is given will be co-ordinated by the general officer commanding the division engaged and by the regional controller who is the senior civilian administrator of the area.

Civil Defence and the Army Medical Services ideas have successfully demonstrated how two medical companies plus bearer or litter personnel can, when used as a casualty filter, undertake the radiac screening and sorting of at least 6,000 casualties within a 24 hour period.

Except for fractures of the femur, spine, and the skull, fractures by and large can be put up in sustaining plasters by nursing orderlies after a few hours training. Such patients are then classified as light cases and are not sent to hospital but to a welfare camp or some other establishment until definitive treatment can be arranged.

The transportable risk cases, and for example, the moribund, are accommodated in suitable shelters or tents on one side of or adjacent to the filter unit. Here they are made as comfortable as possible. When one has to undertake a task such as this it costs no more effort to do it nicely.

Serious Casualties must be assessed by the most competent surgeon available whose diagnosis on the casualty label must remain

firm throughout the evacuation channel. This diagnosis is the means of admitting the patient to hospital. Groups of 20 or 30 of these patients are assembled in the filter unit and despatched as a convoy directly to a particular hospital. These methods of filtering casualties were used in both the Great War and the World War 1939-1945, in order to prevent the rearward hospitals from being swamped.

The patients should be admitted direct to the ward and bedded down as quickly as possible. As they have been assessed by a competent surgeon in the filter unit, it will be a waste of time and man-power to re-assess them in the reception or casualty departments of the hospital. This procedure avoids bottle necks. After admission to the ward, documentation is amplified while the patients are being settled in. Supportive treatment such as intravenous drips, suction, sedation, and the administration of antibiotics are automatically carried out by the nursing orderlies. Unorthodox but realistic have we the right to deny patients succour? After the ward is quiet and settled down the medical officers do their round and re-assess the patients.

Dietary for the first three days consists largely of soup, fluids and bread. After the fourth day one should have time to develop a silver grill service.

The most important question is to determine how many beds for seriously ill patients particular hospitals can maintain. This figure is the limiting factor. I feel that the crisis expansion cliché is a snare and delusion. If a hospital has 400 beds, can its staff which in all probability will be depleted, adequately look after 400 seriously or dangerously ill patients. Is it right to ask them to expand by 50% or even 15%? It has been a common practice in military hospitals to have a crisis expansion of 30%-50%, and at the same time as the result of a dispersal factor, accept any state that our hospitals are full if only 80% of the beds are occupied. Such expansions are possible if a goodly proportion of the patients are suffering from skin disease, ingrowing toe nails or dyspepsia.

Having determined the critical figure, that is the number of seriously ill patients the hospital can look after, I mean care for, not accommodate, that number and that number only should be admitted, after which the hospital gates should be locked otherwise instead of doing the most good for the greatest number one will do a great number a disservice.

At present we in the Army are emphasising forward surgery. We believe that where possible mobile hospitals should move right into the devastated area to deal with the desperately injured. There will be no time to gain experience. One must therefore accept and abide by the experience gained by the surgeons of the Great War and rely on forward surgery.

Recently the British Medical Association have asked the Army Medical Services to give lectures and demonstrations to assemblies of their members. The Voluntary Aid Societies such as the Order of St. John and the British Red Cross Society are also interested in our training.

THE FUTURE

I have reminded my medical officers that they have not always held the high position they do today nor has the status of the Medical Services of the Army been achieved solely by the skill of its surgeons and physicians. They as clinicians are largely concerned with the ravages of war and cannot in a big way be classified as manpower savers.

The real importance of the medical officer, the general duty medical officer, was brought out by Florence Nightingale. It is just one hundred years ago since she and Sidney Herbert, the then Secretary of State for War of the United Kingdom, introduced a sanitary code into the Army which established the medical officer's position at all levels. From that date the good health of the men was to be as much the business of the Commander as their efficiency and drill. His medical officer became his adviser on all hygiene and medical matters.

No longer need the Director General of

the Medical Services of the Army state in public "it would be an impertinence on my part to approach the Commander-in-Chief with suggestions as to the health of the army."

Although today the medical officer is the accepted adviser to his Commander, is he going to retain this position? Lincoln's warning although in different circumstances is still apt, "The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty and we must rise with the occasion." Unless we arise to the occasion our prerogatives will be taken over by scientists or even the powerful advertising organisations, both of whom with religious zeal are able through the medium of the press to reach the Commander at a very impressionable time, namely, at his breakfast table.

Balanced opinions and guidance on army health and medical matters can only be given by one who is above the average in his profession. He must possess a sound basic knowledge and after careful selection be trained for his army career. Be he general duty medical officer or a specialist he must be a responsible leader and trainer of men.

He must never forget that his prime duty is the prevention of wastage of manpower as witness the malarial control in the late Pacific campaign. If the medical officer of the future holds on to these assets he will always be assured of his place in the councils of war.

In closing I would thank you all for the many kindnesses and the generosity I have received at your hands. I have learned a great deal and I trust that I will in some small way be able to cement and strengthen the friendship between our two Medical Services.

I have had ample evidence that the average man in Britain's conception of you Americans is right. In his mind you are portrayed by the "Man of the people." He whose monument in Parliament Square London holds a very honourable place among our greatest. That fine and noble being whose Gettysburg words hold good for and are revered as their own by all freedom loving nations,

"That this Nation under God, shall have a new birth of freedom; and that the government of the people by the people for the people shall not perish from the earth."



GOOD CITIZENSHIP

1. Respect for oneself.
2. Respect for others.
3. Working well with others.
4. Holding close to one's ideals for one's home, community, and country.
5. Participation in government at all levels, particularly local government (democracy only works when each individual assumes his share of responsibility).
6. Keeping sound in body, mind, and spirit.
7. Obtaining as much formal education as is possible.
8. Assuming responsibility to help those less fortunate than oneself.

Edward Foss Wilson, Ass't. Sec'y of Health,
Education, and Welfare, in an address before
North Carolina State 4-H Clubs,
State College Station, Raleigh, N.C., July 26, 1957.

Postgraduate Education in the Army Medical Service

By

MAJOR E. M. THRONE, MC, U. S. Army, AND CAPTAIN JOSEPH ISRAELOFF, MSC, U. S. Army†

THE Army Medical Service, in keeping with the rapid development of medical science in recent years, is placing increasingly greater emphasis on a program of postgraduate medical education for its officers as a means of continuing to maintain the high level of Army health. Since World War II, graduate professional education in the Army has paralleled civilian medicine's interest in specialization by firmly establishing its residency training programs until today it is able to offer Medical Corps officers opportunities for residency training in 24 fields of medicine and surgery. Residency training, however, is but the second link of the vital three-link chain in the ever continuing education of a physician, i.e., undergraduate, graduate, and postgraduate medical education. The third link postgraduate education, in the Army as in civilian medicine, is winning wider recognition in the education of a physician. Each of the links in this three-linked chain is an integral part of Army Medical Corps officers' educational development. By means of the Army's postgraduate professional education training program, Army Medical Corps officers are afforded an opportunity to keep abreast of the changing dynamics of their art and the advances in their science. In order to meet the responsibilities of their profession and to perform effectively, Medical Corps officers have the obligation to continue their education throughout their service careers.

Postgraduate medical education in the Army consists of two distinct programs—the inservice postgraduate course program and the civilian institution training program. Inservice postgraduate long and short courses are conducted at the following

named Army teaching hospitals and activities:

Walter Reed Army Hospital
Brooke Army Hospital
Fitzsimons Army Hospital
Letterman Army Hospital
Valley Forge Army Hospital
Army Medical Service School
William Beaumont Army Hospital
Madigan Army Hospital
Tripler Army Hospital
Walter Reed Army Institute of Research

The civilian institution training program affords Army Medical Corps officers an opportunity to take postgraduate training at the country's leading colleges and universities that is not otherwise obtainable at service schools.

INSERVICE POSTGRADUATE COURSES

Postgraduate Short Courses for Army Medical Corps Officers

While many of the postgraduate professional short courses conducted at the Army's teaching hospitals are of general applicability to physicians interested in the clinical fields of medicine and surgery, a number of these courses are in fields of unique interest to the military establishment. Courses of the latter type are the "Surgery in Acute Trauma" courses conducted by all of the above listed hospitals, and the "Management of Mass Casualties" courses given a total of ten times a year at both the Walter Reed Army Institute of Research and the Army Medical Service School.

Courses in the clinical fields are of the refresher or advanced clinical type and are given on two qualification levels. Level I courses are for board certified and board qualified Medical Corps officers, and are generally intended for chiefs or assistant chiefs of services at large Army hospitals or for officers well advanced in the study of their specialty. Level II courses are for officers partially qualified in the specialty

† Chief and Ass't Chief, respectively, Professional Training Branch, Education and Training Division, Office of the Surgeon General, Department of the Army, Washington, D.C.

and for officers with a special interest in the specialty, such as ward officers and dispensary surgeons responsible for medical treatment in the specialty.

The Army's postgraduate professional short courses are conducted essentially for Army Medical Corps officers; however, in accord with existing policy a given number of spaces at each Army course is allocated to the medical services of the Departments of the Air Force and Navy. Both of these services not only send many of their officers to the Army courses each year, but also frequently actively participate in the presentation of these courses.

In addition to active Medical Corps officers of the Army, Navy, and Air Force attending the Army's inservice short courses, a number of spaces are authorized for Medical Corps Reserve officers not on active duty. Each year a specific number of the maximum spaces set aside at each course is authorized Zone of the Interior Army Commanders for Reserve Medical Corps officers under their jurisdiction. Attendance by Reserve Medical Corps officers has in past years been remarkably good, with such attendance frequently serving as the Reserve Medical Corps officers' only link during the year with Army medicine. By means of this program Reserve Medical Corps officers are able to renew old acquaintances in the Army Medical Service, revisit military hospitals, and at the same time receive valuable instruction that will serve them well in military situations should the need arise and is of value in their daily practice of medicine as civilians.

Physicians of such governmental agencies as the Veterans Administration, the Public Health Service, and the Federal Civil Defense Administration are invited to these courses and have represented their agencies in the past in sizeable numbers.

The "Management of Mass Casualties" courses, although intended primarily to provide Army Medical Corps officers with an indoctrination in current concepts on the management of mass casualties resulting from the employment of nuclear weapons,

has generated a marked interest among civilian medical organizations as well as government agencies. The American Medical Association has given these courses its official indorsement and its Council on National Defense sends representatives to a number of the courses. More than 60 representatives of the country's medical schools have attended past "Management of Mass Casualties" courses, and since the growth of the Medical Education for National Defense (MEND) Program, it has become expedient to authorize the National Coordinator of MEND a proportionate quota of spaces for its medical school membership. Other organizations and agencies who are sending representatives to these courses are the American Hospital Association, the American Nurse's Association, the Public Health Service, the Federal Civil Defense Administration, the American Dental Association, the National League for Nursing, and the Selective Service System.

Army Regulation 350-219, "Education and Training, Professional Education and Training for Army Medical Service Officers," governs the establishment of the Army's inservice postgraduate course program. Those postgraduate courses scheduled for Fiscal Year 1958 are published in Department of the Army Circular 621-5.

Table I lists the inservice postgraduate short courses for Medical Corps officers that are scheduled for Fiscal Year 1958 at the installations indicated.

Postgraduate Courses for Officers of Component Corps of the Army Medical Service

Inservice postgraduate level courses are conducted for officers of Corps other than Medical Corps. The Army Dental Corps conducts extremely popular courses in such fields as Oral Surgery and Prosthodontics; the Veterinary Corps in such fields as Radioactive Contamination of Food; the Army Nurse Corps and the Army Medical Specialist Corps in such clinical and administrative fields as anesthesiology, pediatrics, nursing administration, and Army Medical Specialist Corps administration.

TABLE I

Course	Installation	Dates
Management of Mass Casualties	Walter Reed Army Institute of Research, Walter Reed Army Medical Center	9-14 September 1957 2-7 December 1957 24-29 March 1958 12-17 May 1958
	Army Medical Service School, Brooke Army Medical Center	23-27 September 1957 18-22 November 1957 24-28 February 1958 24-28 March 1958 2-6 June 1958
Principles of Medical Operations in Nuclear Warfare	Walter Reed Army Medical Center	3 September-5 October 1957
Tenth Annual Symposium on Pulmonary Diseases	Fitzsimons Army Hospital	16-20 September 1957
Present Concepts in Internal Medicine	Letterman Army Hospital	28 October-2 November 1957
Forensic Pathology	Armed Forces Institute of Pathology	4-8 November 1957
James C. Kimbrough Urological Seminar	Walter Reed Army Medical Center	25-27 November 1957
Application of Histochemistry to Pathology	Armed Forces Institute of Pathology	2-6 December 1957 3-7 February 1958
Pathology of Diseases of Laboratory Animals	Armed Forces Institute of Pathology	9-13 December 1957
Oral Surgery	Walter Reed Army Medical Center	6-10 January 1958
	Letterman Army Hospital	21-25 April 1958
Review of Neuroanatomy and Neurophysiology	Walter Reed Army Medical Center	10-22 February 1958
Experimental Basis of Psychiatric Theory	Walter Reed Army Medical Center	10 February-8 March 1958
Treatment of Fractures	Brooke Army Medical Center	14-16 March 1958
Ophthalmic Pathology	Armed Forces Institute of Pathology	17-21 March 1958
Pathology of the Oral Regions	Armed Forces Institute of Pathology	24-28 March 1958
Medico-Military Application Course for Nuclear Medical Officer	Walter Reed Army Medical Center	24 March-2 May 1958
Surgery in Acute Trauma	Letterman Army Hospital	31 March-2 April 1958
	Fitzsimons Army Hospital	1-3 April 1958
	William Beaumont Army Hospital	7-9 April 1958
	Madigan Army Hospital	7-9 April 1958
	Brooke Army Medical Center	6-8 May 1958
Principles of Mycotic Infection	Armed Forces Institute of Pathology	19-23 May 1958

The Medical Service Corps, which forms one of the largest of the Corps of the Army Medical Service in terms of number of officers has, in past years, conducted postgraduate level courses for its Medical Allied Sciences Section in such fields as laboratory procedures and sanitation. During Fiscal Year 1957, for the first time two postgraduate level courses for the Pharmacy, Supply and Administration Section of the Corps were conducted for Army Registrars and for Army Operations Analysts. Both courses were given at the Walter Reed Army Institute of Research and utilized as expert lecturers and instructors personnel from that institution as well as from the Army Surgeon General's Office. Participants came from Army activities all over the country and from Army medical installations and headquarters in overseas commands. Both courses proved extremely popular and were noteworthy in highlighting for the officers in these fields the most recent doctrine and experience available. Because of the value of these courses to Medical Service Corps officers, five institutes in fields of significance to this Corps will be conducted during Fiscal Year 1958. The institutes to be given are for Executive Officers, Supply Officers, Personnel Officers, Comptrollers and Registrars. The Medical Allied Sciences Section will have a course on "Current Trends in Laboratory Procedures," and officers of the Sanitary Engineering Section will be offered a course in "Industrial Hygiene Engineering."

For Fiscal Year 1958 a total of 3,369 spaces has been set aside for personnel desiring to attend postgraduate short courses that are scheduled to be conducted by the Army Medical Service.

Table II lists the postgraduate short courses scheduled for Fiscal Year 1958 for Army Medical Service officers with Corps participation.

Inservice Long Courses for Army Medical Service Officers

Long courses for Army Medical Service officers are designed to provide required training essential to the career patterns of

the officers concerned, and to afford officers an opportunity to pursue advanced and extensive training in both clinical and technical fields.

The 24-week Army Medical Service Officer Advanced course given at the Army Medical Service School at Brooke Army Medical Center, Fort Sam Houston, Texas, is an example of a career course for medical service officers that frequently serves as a stepping stone to such higher career courses as those given by the Command and General Staff College, the Army War College, the National War College, or the Armed Forces Industrial College.

In the clinical and technical fields medical service officers have an opportunity to attend approximately 20 long courses of instruction in such fields as military psychiatry, hospital administration, nursing administration, occupational therapy, electroencephalography, military medicine and allied sciences. These courses are given at both the Army Medical Service School and the Walter Reed Army Institute of Research.

Long course training gives medical service officers a unique opportunity to pursue advanced and more extensive training at Army service schools that are specifically designed to provide training of immediate and direct Army applicability.

CIVILIAN INSTITUTION TRAINING PROGRAM

For training in fields that cannot be obtained at an Army activity such as a hospital, laboratory, or service school, Army Medical Service personnel are sent to civilian institutions for periods ranging from a few days to one year or more. The Army Medical Service civilian institution training program is governed by Army Regulation 350-218; the current announcement concerning training opportunities at civilian colleges and universities is contained in Department of the Army Circular 350-1.

Attendance at civilian institutions by Army Medical Service personnel is a carefully supervised program with personnel trained under it only to the extent necessary to meet service requirements.

Long Term Training. Selection of medi-

TABLE II

Corps	Course	Installation	Dates
MC, DC, VC, ANC, MSC, AMSC	Management of Mass Casualties	Walter Reed Army Institute of Research, Walter Reed Army Medical Center	9-14 September 1957 2-7 December 1957 24-29 March 1958 12-17 May 1958
		Army Medical Service School Brooke Army Medical Center	23-27 September 1957 18-22 November 1957 24-28 February 1958 24-28 March 1958 2-6 June 1958
DC	Prosthodontics	Letterman Army Hospital	7-11 October 1957 7-11 April 1958
		Walter Reed Army Medical Center	9-13 December 1957 2-6 June 1958
MC, DC, VC	Pathology of Diseases of Laboratory Animals	Armed Forces Institute of Pathology	9-13 December 1957
MC, DC	Oral Surgery	Walter Reed Army Medical Center	6-10 January 1958
		Letterman Army Hospital	21-25 April 1958
MC, DC	Pathology of the Oral Regions	Armed Forces Institute of Pathology	24-28 March 1958
DC	Oral Diagnosis and Therapeutics	Walter Reed Army Medical Center	19-23 May 1958
ANC	In-Service Education for Nursing Service Personnel	Walter Reed Army Medical Center	17-22 March 1958
ANC	Work Conference on Central Materiel Services	Walter Reed Army Medical Center	16-19 September 1957
ANC	Anesthesiology for Army Nurse Corps Officers	Fitzsimons Army Hospital	23-27 September 1957
ANC,	Nursing in the Medical	Walter Reed Army Medical Center	7-18 October 1957
AMSC	Management of Mass Casualties		7-18 April 1958
ANC	Army Nurse Corps Educational Coordinators and Instructors	Brooke Army Medical Center	4-8 November 1957
ANC	Obstetrical Nursing	Walter Reed Army Medical Center	18-23 November 1957
ANC	Army Health Nursing	Walter Reed Army Medical Center	2-13 December 1957
ANC	Operating Room Nursing	Walter Reed Army Medical Center	13-18 January 1958

Table II (continued)

Corps	Course	Installation	Dates
ANC	Nursing Administration	Brooke Army Medical Center	12-23 May 1958
VC	Examination for Radioactive Contamination of Food	Walter Reed Army Medical Center	20 January-15 March 1958
AMSC	Institute for Army Medical Specialist Corps Officers	Walter Reed Army Medical Center	6-12 October 1957 18-24 May 1958
MSC	Current Trends in Laboratory Activities	Walter Reed Army Medical Center	7-19 October 1957
MSC	Institute for Executive Officers	Walter Reed Army Medical Center	23-28 September 1957
MSC	Institute for Supply Officers	Brooke Army Medical Center	3-7 March 1958
MSC	Institute for Personnel Officers	Walter Reed Army Medical Center	31 March-4 April 1958
MSC	Institute for Comptrollers	Walter Reed Army Medical Center	14-19 April 1958
MSC	Institute for Registrars	Walter Reed Army Medical Center	28 April-2 May 1958
MSC	Industrial Hygiene Engineering	Walter Reed Army Medical Center	2-14 June 1958

cal personnel, especially for long term training (courses or programs of instruction of 20-weeks' or more duration) is a highly deliberative process and accomplished by majority vote of The Surgeon General's Professional Education and Training Committee, composed of the Chief of the Education and Training Division, Chief of the Professional Division, and Chief of the Personnel Division at the Office of The Surgeon General. This committee meets periodically in Washington to consider all matters concerned with the education and training of medical service personnel, and gives careful consideration to recommendations and applications of officers for college or university training.

Although the enrollment of medical service personnel at a civilian college or university is not for the express purpose of obtaining an undergraduate or graduate degree but to obtain training not otherwise available at

a military installation, The Surgeon General poses no objection to those officers who are able to earn a degree which is incidental to, or a normal progression resulting from their training. Thus many medical personnel have been able to earn bachelor's, master's, or doctorate degrees in such fields as nursing education, biochemistry, public health, radiation biology, business administration, personnel administration, institution management, radiological physics, entomology, etc.

Short Term Training. While the enrollment of medical service personnel for long term training at civilian colleges and universities is a program of limited applicability, the participation of medical personnel at civilian institutions for short course training is a much more liberal program and one that has served the Army Medical Service well to meet requirements for training of individuals in highly specialized fields. Ex-

amples of such fields in which medical service personnel have been enrolled at civilian institutions are: "Endaural Temporal Bone Surgery Including the Fenestration Operation," Lempert Institute of Otolaryngology, New York; "Institute on the Care of Premature Infants," New York Hospital, Cornell Medical Center; "Surgery of the Hand," Division of Graduate Medicine, Tulane University School of Medicine; "Epidemiology," Johns Hopkins University School of Hygiene and Public Health; "Basic Radiological Health," Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio.

The civilian institution training program also serves as a most helpful vehicle in assisting Army Medical Corps officers who are preparing for their examinations by the various American Specialty Boards. For example, in past years the Army's residents in ophthalmology have been attending an outstanding basic science course in the field, "The Lancaster Course in Ophthalmology," conducted by the Ophthalmological Study Council, Sullivan, Maine. These courses serve, in addition, to keep medical service officers abreast of recent developments in the fields of their interest.

Number of Personnel Attending Civilian Institutions. Although officers of all Corps have participated in the civilian institution training program, because of the unique training requirements of the Army Medical Service members of one Corps have attended and will attend civilian colleges and universities in greater number than members of another Corps. Medical Corps officers, being graduate physicians, their further training consists essentially of residency training and attendance at meetings, conferences, seminars, and postgraduate short courses. It will be noted in Table III that this factor is demonstrated by the proportionately larger number of civilian institution short courses attended by Medical Corps officers in comparison with long term civilian institution training. Table III depicts, also, the fact that a proportionately large number of Army Nurse and Medical Service Corps officers have been and continue to be en-

TABLE III
ARMY MEDICAL SERVICE PERSONNEL ATTENDING
CIVILIAN INSTITUTIONS—FISCAL
YEARS 1956-57

Corps	Number in Long Course Training	Number in Short Course Training
	FY 1956	
MC	8	67
DC	13	8
VC	6	109
ANC	28	31
MSC	21	47
AMSC	5	18
Enlisted Men	0	1
	81	281
	FY 1957 (as of 1 April 1957)	
MC	8	41
DC	12	8
VC	1	39
ANC	28	23
MSC	25	41
AMSC	7	10
Enlisted Men	0	3
	81	165

rolled in long term courses. This is accounted for by the continuing requirement for the training of Army Nurse Corps officers in nursing specialties such as nursing administration, nursing education, and clinical fields; and the need for Medical Service Corps officers in the fields of comptroller-ship, business administration, and in the sciences allied to medicine.

SUMMARY

Increasing emphasis is placed on postgraduate medical education in the Army as a means of continuing to maintain the high level of Army health. The Army's program of postgraduate medical education evolves from two implementing vehicles—the in-service postgraduate course program and the civilian institution training program. For Fiscal Year 1958 a total of 3,369 spaces has been authorized for postgraduate short courses conducted at Army teaching hospitals and service schools. In addition to Army officers attending these courses, space has

been reserved at these courses for medical personnel of the other services and for civilian physicians representing various governmental agencies and medical organizations.

The Army's civilian institution training program for medical personnel is designed to provide training at colleges and universities throughout the country in those highly specialized fields that cannot feasibly be taught at Army teaching hospitals, service schools, or laboratories. This program affords medical personnel an opportunity to attend courses at leading centers of learning on both a short and long term basis, with many individuals able to earn undergraduate and graduate degrees in fields related to

medicine and medical administration. Civilian institution training provides medical service officers with broader perspectives and prevents an educational inbreeding with all its deleterious effects.

Education and training in the Army is a well-rounded and comprehensive program whose objectives are to provide the highly trained personnel needed to cope with the complex and specialized requirements of the Army Medical Service. Graduates of these courses are in a position, by imparting the knowledge they gained, to enhance the Army's inservice teaching programs for interns, residents, nurses, and other medical service personnel.



COMFORT IN CAR CAN KILL

Comfort can be a killer.

Modern, high-speed roadways eliminate many of the annoying aspects of driving. A motorist doesn't have to do much more than to keep a hand on the steering wheel, and a foot on the gas pedal. Stop-lights are few, turns are almost never sharp, and other cars are usually a comfortable distance away.

Each additional convenience means additional danger to the driver. One of the biggest threats to human life on highways is road hypnosis—a state of blurry half-sleep, brought on by the monotony of driving.

The purr of tires, a spot of sunlight on the dashboard or hood, an unchanging ribbon of roadway, soft radio music, the hum of the engine—all can hypnotize a driver.

Many precautions can be taken. They include conversation, frequent stops, drinking a cup of coffee, and running the windshield wipers to wake up tired eyes.

If sleep seems inevitable, it pays to pull over and take a nap. It's better to lose a few minutes of traveling time than to run the danger of hurtling to violent death behind the wheel of an out-of-control car.

National Naval Medical Center News

EDITORIAL

Surgery in World War II

WAR without surgery is inconceivable. Since surgery during World War II claimed many victories over death and restored many wounded and injured persons to useful activities, a level never before attained, it is vitally important that the record of that branch of medicine be reviewed and that the record be preserved for future generations.

The Medical Department, U. S. Army, *Surgery of World War II*, General Surgery* was recently published by the Surgeon General of the Army. A review of that book by the president of our Association, Dr. Amos R. Koontz, a prominent surgeon on the staff of The Johns Hopkins University, Baltimore, should be of interest to all. In his words:

"This volume is divided into three parts. Part I (78 pp.) is on *Resuscitation, Control of Pain, and Anesthesia* and has been written by Dr. Henry K. Beecher.

"Part II (255 pp.) is on *Abdominal Injuries and the Initial Surgery of Abdominal Wounds*. There are a great many chapters in this part, written by a large number of contributors. This part covers wounds of all organs of the abdomen including the great vessels.

"Part III (37 pp.) is on *Colostomy* and was written by Dr. D. Henry Poer.

*MEDICAL DEPARTMENT, UNITED STATES ARMY—SURGERY IN WORLD WAR II—VOLUME II—GENERAL SURGERY. Editor-in-Chief, Colonel John B. Coates, Jr., MC, U. S. Army; Editor for General Surgery, Michael E. DeBakey, M.D.; Associate Editors, W. Philip Giddings, M.D., and Elizabeth M. McPetridge, M.A., Office of the Surgeon General, U. S. Army. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D.C., Price \$4.25.)

"The cases reported in this valuable and very remarkable volume are almost all from casualties operated upon by members of the 2nd Auxiliary Surgical Group. The compilation of results, which were so valuable as a guide to future work, was made possible because the surgical teams of the Group had periods of inactivity which they devoted to studying their results and compiling their statistics. Dr. Edward D. Churchill, who was Consultant in Surgery for the North African and Mediterranean Theatres of Operation, attributes the fine reporting work of the Group to the 'wise insistence' of their Commanding Officer, Colonel (now Brig. Gen.) James H. Forsee, MC, on maintaining duplicate and full clinical records. It is easy to let down standards in war time and only a wise head could have seen the value of preserving the record of the wealth of experience as a guide for future work. Evidence of the fine work done by our surgical teams is attested to by the remark which a Professor of Surgery from Oslo made after visiting the forward area of the Fifth United States Army in Italy, and whom Dr. Churchill quotes as follows: 'You are holding to the standards of university clinic surgery under fire and in tents with mud floors.'

"The 2nd Auxiliary Surgical Group was composed of some 50-odd surgical teams. Twenty-eight of these teams were general surgical. The remainder were teams for thoracic surgery, orthopedic surgery, neurosurgery, maxillofacial surgery, and shock teams. Their work was carried out in forward areas such as division clearing stations and field hospitals. The members of the Group had been carefully selected and were well trained. Their teams operated in North Africa, Sicily, Italy, and into Southern France and Germany. It was the first such group to ever be organized in the American

Army, was the first to see combat, and had a longer period of activation than any other group. It is said to have treated more severely wounded, to have participated in more campaigns than any other group, and to be the only group to make the contribution of documenting its experiences. Its teams cared for some 3,500 abdominal and over 900 thoraco-abdominal casualties. More than 50 scientific papers were published by members of the Group during the war. Ten per cent of the Group were awarded Purple Hearts. One medical officer of the Group, who was killed in action, was awarded the Distinguished Service Cross posthumously. A nurse and two enlisted men were also killed in action. Approximately 50% of the Group received awards and decorations from the American and foreign governments.

"This volume, which reports work done in large part by this Group, is a thrilling account of the most advanced surgery of any war. It is natural that it should be.

"One of the great lessons learned in World War II was that the time lag between the time a man was wounded and the time he reached the operating table had been entirely too long in all previous wars. The patients were being handled too much, were being evacuated too far, with delays for inspection purposes along the line of evacuation. Many lives were saved by eliminating this routine and instituting the principle of operating on all cases, in which time was of the essence, in the forward areas.

"Resuscitation, which had never been so widely practiced in war before, was a prime factor in reducing the mortality rate. It was soon found that plasma was not an adequate substitute for whole blood. The liberal use of whole blood saved many lives which would otherwise have been lost. Penicillin was a factor when it was finally introduced. The use of oxygen was highly important. Cyanosis could often be overlooked in a hasty examination under poor light in the preoperative tent. When present, it was a more important and more readily detectable sign of anoxia and oxygen deficiency than low hemoglobin levels. The liberal use of

oxygen in these cases often meant the difference between life and death. The importance of emptying the stomach preoperatively was early recognized.

"The difference in results of resuscitation between World War I and World War II is illustrated by the following: During World War I, of 256 patients sent to an operating station for seriously wounded, 41 died in spite of attempts to combat shock by various methods, leaving only 215 who received operative treatment. In marked contrast, under similar circumstances in a field hospital in World War II, there were no preoperative deaths among 297 consecutive patients admitted for surgery.

"The management of abdominal injuries claims equal rank with resuscitative measures as one of the major advances made in war surgery during World War II. The general policy in World War I was non-intervention surgically in abdominal injuries because it was felt that these cases would die anyway. They were generally seen many hours, or even days, after the wound had been incurred, and by that time (in the case of bowel injuries) hopeless peritonitis was already established. The management of these cases soon after injury, close to the front, after proper resuscitative measures, made all the difference in the world in World War II. No case was denied any advantage which surgery might offer him, because of the severity of his wound. Resuscitative measures were promptly instituted, and while it is true that a few cases failed to respond and died during the attempted resuscitation, they were the exceptions. Probably less than 1% of the casualties with abdominal injuries were regarded as too severely wounded to withstand operation. Lack of operation almost universally meant certain death. Surgery saved most of them. Of 3,154 casualties of abdominal wounds operated upon during 1944 and 1945, most of them were saved from certain death by surgery, and a large majority of them were left with no significant physical abnormalities. This is surgery triumphant!

"One of the things that made abdominal

surgery so successful was the invariable rule that all wounds of the large bowel should be exteriorized, or, if that was not possible, a colostomy must be performed proximal to the wound. This made the handling of wounds of the big bowel comparatively safe and made the mortality rate much less than if an attempt had been made to repair the wound of the bowel at the primary operation. The bowel could then later be properly prepared for operation and suitable resection and anastomotic repair performed at a suitable time.

"The handling of wounds of the liver was also an advance over previous war surgery. Various methods were tried early. In a few cases the liver was sutured but this method was abandoned. Packing of the liver was extensively used in the early years but was later largely abandoned. It caused complications such as secondary hemorrhage, abscess formation, and liver necrosis. It was found that bleeding from most liver wounds stopped spontaneously. Eventually the principal method of treatment, after exploration, was the drainage of Morrison's pouch to prevent biliary peritonitis. The saving of life was amazing.

"The management of all other abdominal injuries are equally well handled in this book.

"Another advance over World War I methods was the transdiaphragmatic approach to thoraco-abdominal wounds. This was simply a war time application of the many lessons learned in chest surgery be-

tween the two wars. With competent anesthetists and suitable anesthetic equipment, temporary pneumothorax is no longer a hazard and cardiorespiratory risks can be reduced to a minimum.

"In Italy morphine poisoning was often detected after resuscitative measures had been started. These patients were wounded men who had been wounded when they were cold and wet and they continued to be cold and wet during the hours between the time they were wounded and the time resuscitative measures were started. In the meantime, they were often given two or three half grain injections of morphine, which was the amount put up in the Army-issue syrettes. Often there was no record of how much they had been given. Aid men along the way had given it routinely, thinking they were helping the wounded man, often when he was not in actual pain. Due to the wounded soldier's being wet and chilled, his circulation was poor and the morphine was not absorbed until he was warmed up in the preoperative tent and resuscitative measures were started. Then the huge doses of morphine took effect and morphine poisoning ensued. The lesson learned was that the dosages of morphine were too large and the administration of them not properly supervised. This was corrected.

"This book is a *must* for all those interested in war surgery or in traumatic surgery of any sort, especially traumatic surgery of the abdomen."



"The true practitioner must not be too disinterested, too mechanical, nor too academic, and he must have a soul."

F. H. Martin, M.D., in *Fifty Years of Medicine and Surgery*.

Around the World

(Ser. II, No. 13)

By

CLAUDIUS F. MAYER, M.D.

MOZAMBIQUE, Northern Rhodesia and Tanganyika are the neighbors of *Nyasaland*, a small, elongated mountainous state, from Lat. 10° to 17° South. The state, which is a member of the Federation of British Central Africa, is 800 km. long, 200 km. wide, having an area of 130,000 km² one fourth of which is taken by lakes (Chiuta, Chilova, Malombi, and the very large Nyasa Lake). The country is under tropical, humid weather, with great oscillations on the highlands, with occasional frosts and violent tempests. Though Lake Nyasa ("Large water" in the *yao* language) was first seen by Europeans in 1616, it was properly described first by Livingstone. It has no communications with the Zambezi; it is an inland sea, abounding in various edible fish.

The *population of Nyasaland* belongs to six main tribes the largest of which is the Shevas. There are also 8,500 Asians and 6,700 Europeans. The capital is Zomba, south of Nyasa Lake, with 6,000 inhabitants (800 whites); it is located in salubrious highlands. Nyasaland gets *its medical service* from a few devoted missionaries. The land has five mission stations: Kota Kota, with a midwifery school; Likwenu, with facilities for lepers; Maumba, Malindi, and Mponda. Each station has a 30-bed missionary hospital. There are several African nurses who talk the native language, but there is only a single doctor, and, for the limited travelling facilities, he is unable to pay more than 2-3 visits to the remote stations.

The work is medical, surgical, obstetrical, and preventive. There are cases of malaria, schistosomiasis, uncinariasis, pneumonia, tuberculosis, and relapsing fever. The surgeon's skill is mostly called for in cases of simple and strangulated hernias, hydroceles,

abscesses, ulcers, and eye infections. There are also many dispensary patients requiring prenatal and child welfare service. The *medical positions in Nyasaland* are hard to fill since the doctor's compensation is full board and lodging, outfit allowance, free passage but a small personal allowance.

This March, a multiracial *university college* opened at Salisbury for Rhodesia and Nyasaland, with the enrollment of 74 students. The Federation of Rhodesia and Nyasaland offers immense possibilities for research workers in every field of knowledge, and the more specialized and long-term researches will be undertaken at the new University College. An urgent problem is control of the tsetse-fly whose physiology and natural history is still not well-known. Organic chemists will soon study some of the drugs obtainable from the plants of the Federation. Linguists and psychologists will also have excellent opportunity for socio-anthropological research among the African peoples.

The wild animals in Nyasaland are protected, except the hippopotamus and the crocodile. Yet, in recent years, officials in Africa became alarmed because the crocodiles are disappearing from certain rivers. This would ultimately result in a regrettable biological imbalance. In the Rhodesia-Nyasaland Federation therefore they contemplate several years' *prohibition of crocodile hunting* until Nature's balance is restored.

The *Pasteur Institute of French Guinea* established in 1925, is located 18 hours of air-travel from Paris, and 6 km. away from the town of Kindia, and it includes an area of 35 hectares. Natives call it *Pastoria*. The institute is the realization of an idea of Calmette. This famous investigator thought that an institute should be organized somewhere

under the tropics where anthropoid apes could be reared in their natural environment, and inoculated with germs of infectious diseases in the course of pathological experiments. For the site of the institute, Guinea was selected where chimpanzees are particularly numerous. First under the direction of a veterinarian, the Kindia Institute is now in charge of a physician.

Pastoria has a monkey husbandry, a park for chimpanzees, and two laboratory buildings. One of the first *large-scale experiments with these chimpanzees* was the study of preventive vaccination with BCG. The inoculated animals remained well and healthy. Since chimpanzees are especially susceptible to tuberculosis, the value of BCG was proved, and the protective immunization of children began. Experiments with the transmission of leprosy and gonorrhea remained unsuccessful. The chimpanzees are also excellent experimental animals for the study of human nutrition. Hematologists also found that all chimpanzees have either an A (90%) or an O (10%) blood-group. Cross-transfusion of blood between man and chimpanzee of similar blood-groups had been without pathological reaction.

The *Kindia Pasteur Institute* also provides the Paris Serotherapeutic Center with snake venom, since French Guinea abounds in venomous snakes. There is a "*serpentarium*" on the institute's grounds where various genera of *Viperidae* are living in freedom, but the *Colubridae* are caged, especially the aggressive and agile *Dendraspis* which is living among the foliage of trees. The institute also performs its traditional role of rabies prevention. But the vaccine which is here prepared is used for immunization of animals only (antirabies vaccine for human use is manufactured at the Dakar Institute). The institute also produces about 4 million doses of smallpox vaccine annually.

BCG vaccine is now manufactured in several laboratories of the world. There are differences in the administration of the preventive dose from one country to another. Many of them use it in parenteral injection; a few are still adhering to the original

peroral method of administration recommended by Calmette (3 doses, each 10 mg). The vaccination is exclusively oral in Brazil, Colombia, and Senegal. In Brazil, where 100 mg doses have been used since 1947, the oral vaccines are prepared in the laboratories of Rio, São Paulo, and Pôrto Alegre. The total yearly consumption of BCG (oral and parenteral) in grams was also the largest in Brazil (almost 393 Kg.) which used more than all other nations of the world together.

Tuberculosis experts in North Africa assembled in Tunis to discuss the value of radiophotography for detecting tuberculosis in the school population of Algeria, the value of ACTH and cortisone in treatment of tuberculosis in Morocco, and the possibility of a dispensary and domestic treatment of pulmonary tuberculosis by means of antibiotics. This system works apparently well in Algeria, but in Libya, according to the experience at the dispensary in *Tripolis*, *ambulatory antibiotic treatment* is neither convenient nor possible in view of the great poverty and miserable way of life of the Libyan population.

An interesting *epidemic of tuberculosis* occurred in a closed community, in a small travelling *military band*. The source of infection was probably a man in Hong Kong who was in close contact with the bandmaster. The bandmaster then infected his wife, and in the course of 1955-56 nine other musicians rapidly became tuberculous. There was a saxophone player, one French-horn player, a cornet player, one oboist, and 5 clarinetists. Only one of them had an "open" pulmonary tuberculosis. It is the impression that the atmosphere a musician creates when blowing his instrument greatly facilitates the spread of pulmonary tuberculosis. It may be remarked that the reeds of clarinets cannot usually be disinfected, while brass mouthpieces are soaked in an antiseptic, or boiled and washed. This epidemic is not an evidence that lung tuberculosis is an occupational hazard of the instrument player. It is most likely that unsanitary working conditions (dark orchestra pits, small and dingy practice rooms, inter-

changing of instruments) greatly contribute to the dissemination of tuberculosis among musicians.

It is strange to hear that *Switzerland*, the headquarters of International Red Cross and other medical welfare agencies, has a serious shortage of qualified nurses. A great hospital has been built recently but it could not be fully used owing to this shortage in nurses. According to the statement of a Geneva nurse, about 1,000 nurses would be needed in her country where 10% of the nursing staff are aliens (in the Cantonal Hospital of Zürich, 20%). The shortage could be relieved if nurses would be used in their primary task only, which is to serve and guard the patient ("*Mulieris animo curant*"). Nurses should not be used for such non-nursing duties as instrumentation at surgical operations, or as anesthetists. (NOTE: The nursing shortage is world-wide. In the U.S., it is partly caused by the tendency to discourage bedside nursing by assigning such duties to less skilled assistants and by overloading the regular nurses with administrative and supervisory duties. This is a movement in the wrong direction, according to some American doctors.)

Los Angeles is not the only town that needs control of its smog. Late this spring the city of *Torino (Italy)* also found that its fumes are reaching the grade of a public menace. The director of the Hygiene Institute of the Torino Atheneum was commissioned to find the best means for getting rid of the obnoxious fumes.

Rehabilitation can work wonders as the example of a *French one-armed dentist* shows. Jacques Bautruche, dental surgeon, lost his right arm during the last World War. At the Namur Hospital, where his arm was amputated, the ward-mate encouraged him to resume his dental practice with his left arm. Now, Bautruche is professor at the School of Dentistry in Paris, and is able to perform very delicate stomatological operations with one hand. "The arm is but an instrument"—he says—"and the operating movement is chiefly a mental one." In addition to his teaching function,

he also maintains a full private practice.

In one of its annual reports the WHO Expert Committee on Drugs Liable to Produce Addiction revealed that the *international use of heroin* in medical treatments has shrunk tremendously in recent years. In 1948 the world's licit production of this drug was 839 Kg. while in 1954 the total amount of production was 132 Kg. It is interesting that about 50 years ago this drug was considered a harmless substitute of morphine. The picture is different concerning the international consumption of other narcotics. The Special Committee on Pethidine of the Australian branch of the British Medical Association compiled figures for 1953 in which year *Australia* had been the relatively largest consumer of pethidine. It used 463 Kg. of the drug, or 53.53 Kg. per million of population. In 1955, the absolute consumption of this drug was still larger in Australia (483 Kg. or 56.9 Kg. per million people). The countries where pethidine consumption was relatively the largest after Australia are New Zealand, Iceland, Denmark, U.S.A., Canada, and the United Kingdom. The greatest morphine-consuming countries are Norway (25.85 Kg. per million), Denmark (19.82), United Kingdom (15.84), Australia (15.49), Iceland (13.51), and Hungary (11.52) (consumption in the U.S., 7.32).

An International Symposium on Curare was held in Rio last August. The meeting discussed the ethnography of South American curares, the botanical origin of the active principle, the chemistry of curarizing alkaloids, synthesis of curare, pharmacological properties, and its application. Another interesting meeting was the 12th International Congress of Occupational Health which was held at Helsinki in July. The congress discussed industrial noise, evaluation of disability, industrial health in general, and the status of the worker with heart disease.

Two international meetings were held on geriatrics, both in July. One was the 4th World Congress of Gerontology and Geriatrics in Meran, the other the International

Symposium on Senile Neuropsychopathy at Venezia. The main topics of the world congress were the biological and sociological significance of old age. The Venezia meeting discussed the physiology of the old brain, the psychology and sociology of old age, and the means of rehabilitation of old people.

A Latvian patriot, Dr. Jekabs Alksnis (1870-1957) died recently. He was a former Russian military surgeon, later the *Medical Inspector of the Latvian Forces* while that country had been independent. He was also once professor of surgery at the University of Riga, and the editor of Latvia's medical journal. After his escape from communism in 1944, he became a rootless displaced person, settling down in England where he devoted his time to the guidance of his Baltic compatriots.

A few weeks ago people all over the world were frightened by the menace of a *new type of influenza* attacking now the countries of the Far East. It spread from Hong Kong, Indonesia, Kuala Lumpur, Singapore, and farther. But neither is the influenza a brand-new type, nor is it the first time that the present variety attacked the Orient, as we may conclude from current reports of Russian virologists. Already in March 1956, the people of *Vladivostok* became acquainted with this variety of influenza virus during an extensive epidemic of "flu" against which the usual protective vaccination seemed to leave people defenseless. Persons struck by the disease experienced sudden high fever, chills, frontal headache, eye-ache, sore throat, lumbar pain at the onset of the sickness. With an irregular course the fever lasted 3-6 days. Sometimes the temperature hardly rose above 99°F. There were but few objective signs of the disease: congested throat and lungs, with scattered rales, and rapid pulse. In some cases, dry pleurisy, pneumonia, rheumatoid joint inflammation and sinusitis complicated the usually short course of the disease. Nobody died from this epidemic of influenza in *Vladivostok*.

Further studies showed that the *Vladivostok* influenza was caused by the simultaneous attack of two viruses: one of them

the well-known Type A₁, the other the less-known Type D, which, until the *Vladivostok* epidemic of influenza, has never (?) been isolated outside of Japan. The *Japanese Type D virus* and the *Far-Eastern influenza virus* are identical according to recent reports of the Russian Virological Institute. All the strains from Sendai, Akitsugu and from *Vladivostok* (No. 390 and No. 960) differ from other "flu" viruses by their production of blood-coagulating substances (hemagglutinins) and their special fondness for fibroblastic cells of the lungs. An attack of this virus makes the patient immune for at least 8 months against Far-Eastern type of influenza.

This *Sendai virus* was first isolated by Sano in 1953 when he described an outbreak of pneumonia among newborn infants in a hospital at Sendai, Japan. The properties of the virus were further studied by Kuroya and Fukumi. Evidence of the virus in the U.S.A. was shown by Jensen as early as 1955. He is the one who called the virus "*Type D*" *influenza virus*. Infection with such virus was also detected in England in 1956 during an outbreak of respiratory disease in a hospital for chronic sick. Other isolated cases were found in stations of the Royal Air Force. Recently, the virus has been also called "*newborn pneumonitis virus*" by English and Scottish authors.

Some time ago a group of humanitarian Barcelona physicians decided to bring relief to sufferers on the wings of beautiful melodies of choral music. Doctors of both sexes joined in a mixed choir known as the *Polyphonic Choir of the Official College of Barcelona Physicians*. The group frequently arranges concerts in the auditoriums of hospitals and clinics. Recently, they participated at an international meeting of music lovers at Arezzo, Italy. (We may remember our own *Doctors' Symphony* which has been holding annual concerts since 1954 in Los Angeles.)

In Italy, too, the classical land of arts, physicians cannot help being influenced by one or the other of the Muses. Artist physi-

cians have formed several associations for their mutual interests and culture. The writer physicians, the painter physicians, and now the musician physicians are grouped in their respective societies. The musicians (*Associazione Italiana Medici Musicisti*) declared in Genova that they wish to save music from degeneration. It is hoped that the physician's special mental attitude, his spiritual balance and self-control will have a salutary effect upon the evolution of modern music.

For ladies whose breast has been amputated an English doctor of Blackpool devised a dummy made up of a cloth bag loosely filled with bird-seed, and inserted into an ordinary brassière. Recently, this *mammary prosthesis of bird-seeds* is available with a filling of polystyrene granules (mark: Malpro). The advantage of the bird-seeds or granules is the "very shiftiness" which brings this model quite close to the natural. . . . *Multa paucis!*

CIVIL DEFENSE WEEK

SEPTEMBER 15-21

PRECAUTIONS FOR AUTOMOBILE DRIVERS

1. Avoid fatigue by alternating driving with others.
2. Plan dinner and a rest for the dusk-to-dark period of changing light.
3. Try to control emotional upsets, caused by such incidents as traffic delays. They frequently lead to driving behavior such as speeding, cutting in, and unsafe passing.
4. When possible, avoid driving during the peak accident period from 3 P.M. to 11 P.M.
5. Anticipate possible reckless driving by others and drive with special attention to other cars.
6. Be sure all mechanical equipment—tires, brakes, and lights—are in top working order.
7. If the car is equipped with safety belts, use them.
8. If a prospective driver suspects that he has any physical condition that might affect control of the car, he should consult his physician before starting his trip.

U. S. Public Health Service.

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It is a privilege to list the firms who have joined The Association of Military Surgeons as Sustaining Members. We gratefully acknowledge their support.

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ASSOCIATION NOTES

Timely items of general interest are accepted for these columns. Deadline is 3rd of month preceding month of issue.

Department of Defense

Ass't Secretary (Health & Medical)—HON. FRANK B. BERRY, M.D.

Deputy Ass't Sec'y—HON. EDW. H. CUSHING, M.D.

STRENGTH OF ARMED FORCES

The total numerical strength of the Armed Forces on June 30 was estimated at 2,794,411; Army, 997,916; Navy, 676,532; Marine Corps, 200,893; Air Force 919,070.

A memorandum issued by the Secretary of Defense, Charles E. Wilson, will reduce over a period of six months the strength of the Armed Forces by 100,000 as follows:

	Enlisted Personnel	Officers	Total Reduction
Army	44,470	5,530	50,000
Navy	13,365	1,635	15,000
Marine Corps	9,100	900	10,000
Air Force ...	21,200	3,800	25,000
	88,135	11,865	100,000

A further reduction of 8,135 officers is expected to follow, making the total reduction for officers 20,000.

APPOINTMENT

Dr. Elmer Hess of Erie, Pa., president of the American Medical Association in 1955, has been appointed as member and chairman of the National Advisory Committee to Selective Service. This committee has to do with the selection of physicians, dentists and allied specialists.

Dr. Hess who served in the Army Medi-

cal Corps during World War I succeeds Dr. Howard Rusk who has held the position since 1950.

SYMPOSIUM

The First Annual Medical Department Symposium for Combined Armed Forces Medical Department Reserve Officers under the auspices of the Commandant, Fifth Naval District, will be held at the U. S. Naval Hospital, Portsmouth, Virginia. October 16-18. The theme is "Advances in Operational Military Medicine."

Among the prominent guests and speakers on the opening day will be Major General James P. Cooney, Deputy Surgeon General of the Army; Rear Admiral P. M. Hughes, Commandant, Fifth Naval District; Rear Admiral O. B. Morrison, Jr., District Medical Officer, Fifth Naval District; Captain G. W. Berry, District Dental Officer, Fifth Naval District; Captain D. J. O'Brien, Director, Reserve Division, Bureau of Medicine and Surgery, U. S. Navy; Captain W. Leona Jackson, Director, Nurse Corps, U. S. Navy, Colonel Inez Haynes, Chief, Nursing Service, Army Nurse Corps; Lieutenant Colonel Grace J. Hayden, Chief Nurse, U. S. Air Force.

Retirement point credits can be earned. Information may be obtained by addressing the District Medical Officer, Fifth Naval District, Naval Station, Norfolk, Va.

Army

Surgeon General—MAJ. GEN. SILAS B. HAYS

Deputy Surg. Gen.—MAJ. GEN. JAMES P. COONEY

HOW TRUE!

Major General Silas B. Hays, Surgeon General of the Army, at the recent gradua-

tion exercises at Walter Reed Army Hospital warned against becoming "so engrossed in running down or treating the disease process that we forget the patient is a sick and worried individual who needs explanations, reassurance, and sympathetic understanding."

"To be competent, the doctor must be skilled in both the science of medicine and the art of medicine," he said.

With many laboratory tests available, an increasing number of diagnostic machines there is a great temptation to fill a clinical record with all sorts of reports and forget about the simple physical examination and the power of observation. The patient becomes a guinea pig for the new tests. He is forgotten as a person with feelings in the great effort to make a diagnosis, mostly through mechanical means. (EDITOR)

FORMER SURGEON GENERAL SPEAKS

Major General George E. Armstrong, (Ret.) former Surgeon General of the Army had these things to say at the Brooke Army Medical Center recently when he was speaking to the graduates of a 39-week course in hospital administration:

"The most important consideration in any hospital is the best patient care at the least possible cost.

"Every hospital patient is deeply concerned about his own condition, and even with today's enlightened medical care, he is suspicious and frightened in strange surroundings.

"Every member of the hospital personnel must feel that he alone is entirely responsible for the patient's psychosomatic treatment. This includes not only the professional and technical attendants, but the administrative staff, food service, and housekeeping detail.

"People in charge of the various departments of a hospital must make suggestions for the improvement of their service, and they must coordinate their suggestions with the activities of other departments. This cannot be done unless the hospital administrator makes it possible for all department heads to meet for discussion and planning. There

must be teamwork. Staff meetings must be held with some regularity, with freedom of thought and freedom of speech.

"Hospital administrators can be the best management and efficiency experts in the world, and their personnel may have the highest professional, technical, and administrative skills. But a good hospital administrator is the one who can tie his respective department together to present a smooth-functioning, forward-looking hospital which is ready to evaluate and accept suggestions for improvement."

SGO ASSIGNMENTS

Col. Philip R. Beckjord, MC, has been assigned as Deputy Chief of the Division of Preventive Medicine, Office of the Surgeon General.

Lt. Col. Harold F. Hamit, MC, has been appointed Chief of the Surgical Research Branch of the Research and Development Division, Office of the Surgeon General. He will monitor research in radiation and thermal burns, plasma volume expanders, preservation and use of blood and blood derivatives, and traumatic surgery.

Lt. Col. Frank A. Partlow, MSC, has been appointed Assistant Chief, Procurement Branch, Personnel Division, Office of the Surgeon General, succeeding Lt. Col. Paul F. Austin, MSC, who has been assigned to duty in Thailand where he will be Advisor to the Surgeon General of the Royal Thai Army.

This is the second tour of duty in the Office of The Surgeon General for Colonel Partlow. He entered the Army in October 1930 as an enlisted man. In September 1941 he was a member of the first Officer Candidate School graduation class for Medical Service Corps officers.

Lt. Col. Arthur D. Sullivan, MSC, has been appointed Chief, Biophysics Branch, in the Research and Development Division of the Surgeon General's Office. In this position he is responsible for both Army and contract research in the biological and medical aspects of ionizing radiation, X-ray and photographic techniques, health hazards of

military chemicals and other areas of the biophysical field.

Prior to the assignment in the Surgeon General's Office Colonel Sullivan was Commanding Officer of the U. S. Army Medical Optical Maintenance Activity in St. Louis.

Lt. Col. Herbert F. Bourdeau, MSC, has been appointed Assistant Chief of the Operations Branch, Medical Plans and Operations Division, Office of the Surgeon General.

Major Edward J. Costello, MSC, has been appointed Administrative Officer in the Inquiry Office of the Professional Division of the Surgeon General's Office. In this position he will handle inquiries that are made concerning the medical care and treatment of military personnel and their dependents.

Major Otto G. Hrdlicka, MSC, has been appointed Logistics Officer in the Medical Facilities Branch, Medical Plans and Operations Division of the Surgeon General's Office. Before this assignment he was an instructor in the field of hospital construction, Department of Administration, Army Medical Service School.

Capt. Seth T. Reese, Jr., MSC, has been appointed Civil Engineer in the Medical Facilities Branch of the Medical Plans and Operations Division, Office of the Surgeon General. The Medical Facilities Branch is charged with the construction, leasing, maintenance and alterations of medical facilities.

Capt. Reese received his Bachelor of Science degree from the University of Maryland in 1950 and his Master of Public Health degree from the University of Minnesota in 1957.

AVIATION WINGS

Fifty Army Aviation Medical Corps officers are to receive their silver wings. Distribution of the new badge is expected to be made by the latter part of 1957. The badge has the caduceus, superimposed on the shield of the Seal of the United States centering the wings.

Officers designated to wear these wings already have non-crew member flying status and pay and perform clinical duties for non-

flying personnel. They are officially recognized as being qualified to conduct medical examinations for flying, to exercise supervision over the health of flying personnel and to furnish medical advice related to Army aviation.

CHINESE OFFICERS AT BAMC

Twenty-five non-English speaking Chinese senior officers are attending classes at the Army Medical Service School. They will study for 15 weeks, concentrating on the staff and command responsibilities of field grade officers in the Medical Service. Special study aids have been provided by a staff of Chinese translators.

A letter from Major General Yang Wentah, Surgeon General of the Nationalist Chinese Army, to Brig. General Elbert DeCoursey, Commandant of the Medical Service School, expressed appreciation for the instruction given by school personnel to the first Chinese group that recently finished the course.

ANATOMY INSTRUCTOR AT AMSS

Dr. Walter Edward Sullivan has been appointed to the faculty of the Army Medical Service School at Brooke Army Medical Center, Fort Sam Houston, Texas.

He held a professorship of anatomy at the University of Wisconsin from 1925-1955 and was a visiting professor at the University of Colorado prior to his appointment to the position at the Army Medical Service School.

Dr. Sullivan is a member of the American Association for the Advancement of Science, American Association of Anatomists, American Association of Physical Anthropologists, and the Society for Experimental Biology and Medicine.

TO BAMC

Major Mercedes Fischer, ANC, who has been a student at The Johns Hopkins University has received her Master's degree in Public Health. She has been assigned to the Army Medical Service School, as an instructor in Army health nursing.

RECEIVES M.S.C. DEGREE

Major William A. Boyson, one of 25 medical residents at Brooke Army Hospital to complete his training recently was the only one of the group to receive a Master of Science degree from Baylor University Graduate School. He has been assigned to Fort Leavenworth, Kansas, to be Chief of the Obstetrics and Gynecology Service of the hospital.

Major Boyson was an Infantry and Armored officer during World War II, returned to medical school after the war, and re-entered the Army in 1950 in the Medical Corps. He went to Korea in 1953 to serve as battalion surgeon and Commanding Officer of the 115th Medical Battalion. He has received the Legion of Merit, the Bronze Star Medal with "V" Device and an oak leaf cluster, a Commendation Ribbon with Medal Pendant and the Combat Medical Badge.

Major Boyson is the son of Colonel W. A. Boyson (Ret.) who is practicing medicine in Mechanicsburg, Pa.

RETIRED

Lt. Col. Thomas C. Jones, VC, retired from the Army on July 31 after more than twenty-one years active duty. He has accepted a position as pathologist at the Angell Memorial Animal Hospital, Boston, Mass.

Colonel Jones has been on duty at the Armed Forces Institute of Pathology where he served as chief of the Veterinary Section of the Department of Pathology and chief of the Laboratory Animal Branch of the Division of Experimental Pathology.

In addition to his duties at the Angell Memorial Animal Hospital, Colonel Jones will be a part-time faculty member in the Department of Pathology, Harvard Medical School, and consultant to the New England Cancer Research Institute.

DENTAL CLINIC OPENED

A newly constructed dental clinic of the permanent type with 28 chairs was opened at Fort Lewis, Washington on August 14.

Among the dental officers participating in the opening ceremonies was Col. Kenneth P. Fulton, formerly Dental Surgeon of the Sixth Army Area, who retired on July 31.

This new clinic is a separate building and will be a model for others, the next of which scheduled for completion is at Fort Dix, New Jersey.

STUDENT NURSE PROGRAM

The first three graduates of the Army Student Nurse program recently arrived at Brooke Army Medical Center for an orientation course at the Army Medical Service School. They are Second Lieutenants Audrey A. Johnson and Marie B. Loken, and Dolores M. Gleich.

The Army Student Nurse Program was initiated to provide financial assistance to student nurses in order to make it possible for them to receive the best possible training. At the end of their second year of nursing training applicants become enlisted members of the Women's Army Corps Reserve, receiving full pay and allowances of those of equal ratings on active duty. They continue their education for one to two years.

NURSES CONFERENCE

To promote more effective communication between the Chief of the Army Nurse Corps and the Army nurse officers, including those in Reserve units, a three-day Chief Nurses' Conference will be held in each of the six Army areas in the United States between September 10, 1957 and February 28, 1958. These conferences replace the single conference formerly held in the Office of The Surgeon General of the Army during the latter half of each year.

This decentralization will enable all chief nurses of Army hospitals within the respective Army area to participate in the conferences. The Chief Nurses' Conference held in Washington each Spring will be continued, according to Colonel Inez Haynes, Chief of the Army Nurse Corps.

The first of the area conferences is scheduled for Fort Knox, Kentucky, September 10-12, where the Ireland Army Hospital

was recently completed and put into use. The final conference is to be held in the 1st Army area (New England locale) the exact date of this and the other conferences to be made known later.

In announcing the innovation, Col. Haynes pointed out that the Washington conference assembled only those chief nurses stationed at the medical centers, the larger Army hospitals and those on the headquarters staffs of the Army areas. Under the new arrangements, not only will all of the Army's chief nurses stationed in this country be eligible to attend but the programs of the conferences will be adapted to the needs of the particular areas. The central theme of these area conferences will be in-service education, both formal and on-the-job. The Chief of the Army Nurse Corps will be present at each of the area conferences. She will be accompanied by several ANC officers on the staff of The Surgeon General. They will report the trends in military nursing and discuss or answer questions regarding personnel assignments, career policies and other matters related to nursing service being initiated from Washington for implementation in the Army areas.

CHANGE OF ASSIGNMENT

Col. Harold W. Glascock, who has been Western Area Command Surgeon in Germany has been assigned as Seine Area Command Surgeon and Commanding Officer of the 196th Station Hospital in France.

NEW BOOK

Orthopedic Surgery in the Mediterranean Theater of Operations, the ninth volume in the Army Medical Service's clinical series was recently published. The work was written by Colonel Oscar P. Hampton, Jr., MC, USAR, assistant professor of clinical orthopedic surgery, Washington University, St. Louis, Mo. He was senior consultant in orthopedic surgery for the Mediterranean Theater during World War II.

The Editor in Chief of the series is Colonel John Boyd Coates, Jr., MC, U. S. Army, who is also Director of the Historical Division, Army Medical Service.

Navy

Surgeon General—REAR ADM. BARTHOLOMEW W. HOGAN

Deputy Surgeon General—REAR ADMIRAL BRUCE E. BRADLEY

SENIOR MEDICAL STUDENT PROGRAM

The Navy's Senior Medical Student Program, with 200 students representing 65 approved medical schools enrolled, will commence this fall when the academic school year begins.

Established as a program with the Ensign 1995 (Medical) USNR Program, its characteristics are:

a. Available to qualified students enrolled at medical schools accredited by the Council on Medical Education and Hospitals of the American Medical Association. Students who have completed their second year of medical school may make application for this training at any Office of Naval Officer Procurement or Main Recruiting Stations. Active duty commences and continues while in attendance during their senior academic year. To be eligible for participation, the individual must be an Ensign, 1995 (Medical) U. S. Naval Reserve, or agree to accept such an appointment if selected. A board convened in the Bureau of Medicine and Surgery selects the candidates for participation in this program.

b. Physical standards of this program are the same as those established for Regular Navy staff corps officers.

c. Active duty commences upon receipt of orders and completion of proper reporting endorsements.

d. The trainee agrees in writing, to accept a Regular Navy commission and if a Regular Navy commission is not tendered, accept an appointment in the Naval Reserve.

e. In accepting an appointment in the Regular Navy or Naval Reserve, as a result of having active service in the Senior Medical Student Program as an Ensign, 1995, he is obligated to serve on active duty and to retain the commission for a period of three years. This active service will commence

upon completion of not more than twelve months of a civilian or Naval Internship.

f. As a medical student, he receives the full pay and allowances of an Ensign, 1995 while so enrolled on active duty.

g. In addition to the pay and allowances, he is credited with two and one-half days of annual leave for each thirty days of active duty served.

h. The wearing of the naval uniform is permitted only when authorized by appropriate naval authority.

i. Timing is very important. An average of four months is required to completely process each application. February 1 each year is the absolute deadline that completed applications must be forwarded to the Bureau of Naval Personnel, Navy Department, Washington, D.C.

MEMBER ADVISORY COMMITTEE

Rear Admiral Richard A. Kern, MC, U. S. Naval Reserve, retired, has been appointed a member of the Naval Research Advisory Committee which is composed of 15 eminent men of science.

The purpose of the committee is to advise the Secretary of the Navy, Chief of Naval Operations, and Chief of Naval Research on trends in research, research potentialities and the over-all research policy in the Navy.

HONORARY PRESIDENT

Dr. Howard T. Karsner, Medical Research Advisor to the Surgeon General of the Navy, has been elected Honorary President of the Society for Geographic Pathology.

The International Society for Geographic Pathology is a non-governmental Society whose aim is the study of relations which might exist between diseases and the geographical areas in which they occur.

GROUND BREAKING CEREMONY

Rear Admiral Irwin L. V. Norman, Assistant Chief for Personnel and Professional Operations, Bureau of Medicine and Surgery, represented the Surgeon General of the Navy at the Groundbreaking Cere-

monies for a new Naval Hospital at Great Lakes, Illinois. He was accompanied by Captain Willard C. Calkins, Chief of the Navy Medical Service Corps.

The new building will be constructed to conveniently accommodate 800 patients and will have facilities for expansion to 1,500 beds.

ASSIGNMENT

Captain Arthur Siegel, DC, recently assumed the duties of District Dental Officer, Eleventh Naval District. He succeeded Captain Louis D. Mitchell, who retired.

RETIRED

Rear Admiral W. P. Dana, MC, who has been Assistant Chief of the Bureau of Medicine and Surgery for Aviation and Operational Medicine, retired on August 1.

Admiral Dana entered the U. S. Navy Medical Corps in 1923. His interest in aviation medicine qualified him as a Flight Surgeon in 1925. He has served in many assignments in the field of aviation medicine.

He was president of our Association in 1956. The Danas address will be: 1621 Via Montemar, Palos Verdes Estates, Calif. Our hearty good wishes for a long and enjoyable retired life.

Captain John C. Allen, DC, retired on July 1 after twenty years of service in the Navy. He will make his home in San Clemente, California.

The following Medical Service Corps officers were retired effective August 1: Commanders Irving Frontis, William B. Gilmore, William C. Lewis, Percy C. Wilson; Lt. Commanders Jesse R. Chambliss, Francis H. Flynn, Samuel C. Marcus, John H. Olsen, Harry E. Rooker, and Abner P. Rowe, Jr.

DENTAL CORPS STRENGTH

At the end of Fiscal Year 1957 there were 928 Regular Navy and 865 Naval Reserve dental officers on active duty. During this period there were 14 Navy Dental officers retired from active duty and four resigned from the Navy Dental Corps.

Air Force

Surgeon General—MAJ. GEN. DAN C. OGLE
Deputy Surg. Gen.—MAJ. GEN. OLIN F. McILNAY

PROMOTED

The following senior medical officers of the Air Force have been promoted to the rank preceding their names: Major General Oliver K. Niess, Surgeon of Pacific Air Forces; Brigadier General Sheldon S. Brownton, Director of Staff, Office of the Assistant Secretary of Defense (Health and Medical); Brigadier General John K. Cullen, Director of Plans and Hospitalization, Office of the Surgeon General.

FACULTY—SCHOOL OF AVIATION MEDICINE

A world-renowned specialist in medical problems of space flight has been appointed Advisor for Research at the School of Aviation Medicine.



U. S. Air Force Photo

(L to R) DR. LAWRENCE E. LAMB; DR. HUBERTUS STRUGHOLD; MAJ. GEN. OTIS O. BENSON, JR.

Dr. Hubertus Strughold, German-born physician and one time Director of the Aero-medical Research Institute of Berlin, will be staff consultant to Maj. Gen. Otis O. Benson, Jr., Commandant of the School at Randolph Air Force Base, on matters of research.

His new assignment emphasizes the growing importance of space medicine in Air Force operations. Since 1949, when the

School's unique Department of Space Medicine was created, Dr. Strughold has been its chief.

Now an American citizen, he has been the recipient of many honors, both in this country and abroad. Among the most recent was the Hermann Oberth Medal of the German Rocket Society for his pioneer studies of environmental conditions beyond the denser levels of the Earth's atmosphere.

Dr. Strughold is the author of a book in English, "The Green and Red Planet," discussing the possibility of life on Mars, and co-author of an early German text on aviation medicine. He is a member of the International Mars Committee.

At the same time, General Benson announced the appointment of Dr. Lawrence E. Lamb as chief of the School's Department of Internal Medicine.

A native of Fredonia, Kan., Dr. Lamb served in the Navy during World War II, and afterwards returned to the University of Kansas, where he received his medical degree in 1949.

Specializing in heart diseases, Dr. Lamb spent two years in the Air Force as chief of the cardiovascular section at the Sheppard AFB Hospital in Wichita Falls, Texas.

On his return to civilian practice, he went to Switzerland in 1954 to do research in electrocardiography as a fellow of the American Heart Association.

A staff physician at the School of Aviation Medicine for the past two years, Dr. Lamb is the author of a forthcoming book, "Fundamentals of Electrocardiography and Vectorcardiography."

APPOINTMENTS

Lt. Col. Robert W. Martindale, MSC, has been appointed Research Secretary for the School of Aviation Medicine, Randolph Air Force Base. In this position he will handle research contracts for the School with civilian laboratories, and handle matters pertaining to the School's research activities. Colonel Martindale received his A.B. degree in economics at Wabash College in 1941 and then enlisted in the Army. He was picked

for officer candidate school and became a hospital executive. Later he transferred to the Air Force Medical Service Corps.

Col. Willie C. Magness, MSC, has been appointed as Director of Administration, School of Aviation Medicine. He has had more than twenty years of experience in medical administration. He enlisted in the Army at the age of 17 and at the outbreak of World War II was a master sergeant at Barksdale Field, La. In 1943 he was commissioned a second lieutenant.

Col. Magness served in the Office of the Surgeon General under Major General Otis O. Benson, Jr., then Director of Medical Staffing and Education, now Commanding the School of Aviation Medicine.

Public Health Service

Surgeon General—LEROY E. BURNEY, M.D.
Deputy Surg. Gen.—W. PALMER DEARING, M.D.

POLIOMYELITIS

For the first 32 weeks of 1957 there have been 2,897 cases of poliomyelitis reported as compared to 6,179 for a like period of 1956. The number of paralytic cases for the same period are 973 for 1957 and 2,993 for 1956.

Over 70 million persons have been vaccinated with at least one shot against poliomyelitis since April 12, 1955, when the Salk polio vaccine was first made available. Vaccination is recommended for all persons up to 40 years of age.

FLU VACCINE

The first supplies of vaccine against Asian influenza have recently been made available to the public. The goal production of 60 million cc by February 1, 1958 has been set.

This vaccine is a monovalent or single strain type which is designed to combat the particular type of influenza which appeared in the Orient this past spring.

A vigorous campaign to urge the maximum use of the vaccine by the public will be instituted by the Public Health Service. It

has been pointed out that with the modern methods of transportation an influenza epidemic could involve all of the United States in less than a month.

Cases of Asian influenza so far have been marked by temperatures of 102 to 104 degrees, headache, sore throat, cough and muscle aches. The fever lasts 3 to 5 days, followed by weakness for several more days. The attack rate in the Far East was approximately 20 percent with a death rate of about two-tenths of 1 percent.

The antibiotics are of no value in combating the influenza but are of value in the aftermath diseases, such as pneumonia, where the secondary invaders take over.

SPECIAL CONSULTANT

Dr. Russell H. Morgan, Professor of Radiology at The Johns Hopkins University has been named as special consultant to the Surgeon General of the U. S. Public Health Service on the public health aspects of radiation.

Dr. Morgan has had more than twenty years of intensive training and experience in the field of radiology, including teaching, research, and practical application of existing knowledge to public health problems involving radiation.

During World War II, Dr. Morgan was Chief of the Radiology Section, Tuberculosis Control Division of the U. S. Public Health Service. He has contributed a number of technical articles in the field of radiology, and was co-author of "Mass Radiography of the Chest," (1945), and contributed to "Handbook of Radiology," 1955.

REAPPOINTED TO ADVISORY COMMITTEE

Drs. Robert Neff Barr of Minneapolis, Minnesota, and Alexander H. Leighton of Ithaca, New York, have been reappointed to the Surgeon General's Advisory Committee on Indian Health, Public Health Service. They will serve for a four-year term.

Both are original appointees to the nine-member council, which was named last year to advise the Service in its efforts to improve and expand medical care and health services

for American Indians. Responsibility for the Indian health program was transferred two years ago from the Bureau of Indian Affairs, Department of the Interior, to the Public Health Service.

Dr. Barr is the secretary and executive officer of the State Board of Health in Minneapolis, Minnesota. Dr. Leighton is professor of sociology and anthropology, associate professor of clinical psychiatry at Cornell University, Ithaca, New York.

LUNG CANCER

The Public Health Service has said that there is increasing evidence that excessive cigarette smoking is one of the factors which can cause lung cancer. This is a little stronger statement than made in 1954 when it was said that there was some evidence that there was an association between cigarette smoking and lung cancer.

Dr. Burney, however, said it is clear that cigarette smoking is not the only causative factor in lung cancer, nor are the precise factors in the cigarette known.

At this point it might be interesting to call attention to *Science Looks At Smoking*, a recently published book by Coward-McCann, Inc., New York; the author is Eric Northrup. There is an Introduction by Dr. Harry S. N. Greene, Chairman, Department of Pathology, Yale University.

In the United States, as pointed out by the Public Health Service, there are more than 25,000 deaths each year from lung cancer. How many of these persons were heavy cigarette smokers is not known. Deaths from cancer make up about 250,000 of the 1.6 million total deaths in the United States each year.

The controversy goes on. There are authorities on both sides of this lung cancer-cigarette smoking subject.

Veterans Administration

Chief Medical Director—WILLIAM S. MIDLETON, M.D.

Deputy Chief Med. Dir.—R. A. WOLFORD, M.D.

APPOINTMENTS

Dr. Julius Lane Wilson, Director of the Henry Phipps Institute of the University of Pennsylvania in Philadelphia, has been appointed chief consultant to the Veterans Administration Director of Tuberculosis, Dr. W. B. Tucker.

Dr. Richard B. Bean, has been assigned as manager of the VA hospital at Boston. He succeeds Dr. George P. Denny who retired in June.

Dr. Kenneth W. Brown has been appointed to the combined position of manager and director of professional services at the VA hospital in Clarksburg, W.Va. He served in the Army Medical Corps during World War II and attained the rank of captain.

Dr. Abraham M. Kleinman, who has been director of professional services at the Veterans Administration hospital in Brooklyn has been appointed as manager of the VA hospital in the Bronx, New York City. He served in the Army Medical Corps from 1942 to 1946 and attained the rank of major. He is certified by the American Board of Internal Medicine.

Art A. Kramish, Ph.D., has been assigned as Chief, Clinical Psychology Service of the VA hospital, Knoxville, Iowa.

Dr. Stanley B. Lindley, who has been director of the professional services at the Veterans Administration hospital in Knoxville, Iowa, has been appointed manager of the VA hospital at St. Cloud, Minn. He is certified as a specialist by the American Board of Psychiatry and Neurology.

William M. McCoy has been assigned as manager of the VA hospital at Hines, Ill., to fill the vacancy created by the retirement of Harry R. Pool. During World War II he was executive officer of the Lawson Army Hospital and attained the rank of lieutenant colonel.

Dr. Thomas J. Ready who has been director of professional services at the Veterans Administration hospital in Providence, R.I., has been assigned as manager of the VA hospital at Washington, D.C. He served in the Army Medical Corps during World

War II and attained the rank of lieutenant colonel.

STUDY TWO LUNG DISEASES

Histoplasmosis and coccidioidomycosis are being studied by the Veterans Administration in cooperation with the Armed Forces. The studies are aimed at testing the effectiveness of new drugs.

The histoplasmosis study is being carried out at the VA hospitals in Kansas City, Little Rock, Ark., Memphis, Tenn., Minneapolis, Minn., Nashville, Tenn., Wood, Wis., and San Juan, P.R., and at the Naval Hospital at St. Albans, N.Y., and Fitzsimons Army Hospital at Denver.

Central laboratories for the study have been established at Kennedy Division of VA's Memphis hospital and at Walter Reed Army Hospital.

The coccidioidomycosis study is being carried out at VA hospitals in Albuquerque, N.Mex.; Dallas, Houston, and Kerrville, Tex.; Fresno, Long Beach, Los Angeles, and San Fernando, Calif., and Phoenix, Tucson, and Whipple, Ariz. The Service hospitals are Fitzsimons Army Hospital, the Naval Hospital at Oakland, Calif., and the hospital at Parks Air Force Base, Calif. The central laboratory for the coccidioidomycosis study is at VA's San Fernando hospital.

REHABILITATION

There is a concerted move to rehabilitate the disabled aged patients in VA hospitals. Dr. A. B. C. Knudson, Director of the Physical Medicine and Rehabilitation Service of the Veterans Administration, said an individual program of rehabilitation was planned for each, under guidance of a physiatrist, who is a specialist in physical medicine and rehabilitation.

A number of patients have been discharged from VA hospitals as a result of this program, some to nursing homes, some to their own homes, some to jobs. This program combines the efforts of all persons who are responsible for the care of patients: nurses, social workers, psychiatrists, doctors.

Miscellaneous

HONORED

Dr. Tom D. Spies, Professor of Nutrition and Metabolism, Northwestern University, was recently honored by Congress in a resolution sponsored by Speaker Sam Rayburn. The resolution reads: "Resolved, by the House of Representatives (the Senate concurring), That the Congress and the American people hereby express their gratitude to Dr. Tom D. Spies for his noteworthy medical achievements toward alleviating the sufferings of his fellow man and for his outstanding contributions to the knowledge of the science of human nutrition, especially in the field of earlier and better methods of diagnosis and treatment of nutritional deficiency diseases."

EMPLOYMENT FOR CARDIACS

Employment horizons for cardiacs with congestive failure are beginning to widen and their occupational potentialities merit further investigation, according to Drs. Leonard J. Goldwater of the Columbia University School of Public Health and Administrative Medicine and John M. Evans of the George Washington University Hospital.

These doctors state that refinements in diagnostic procedures and important improvements in drug therapy have affected changing attitudes of the medical profession. Their article appears in *Industrial Medicine and Surgery* (26:182; 1957).

We might say that the movement to rehabilitate persons is gaining in all fields. The day when the doctor told the patient that he was "through" is rapidly drawing to its end. We must keep people feeling that they have a useful purpose in this world, even though their activities may have to be curtailed in some areas.

POPULATION

By mid-1955, the population of the entire world was estimated at about 2,691 millions against 2,246 millions in 1940, 2,013 millions in 1930 and 1,810 millions in 1920.

Rather more than half of all the people

live in Asia (excluding the USSR). Europe (excluding the USSR) is easily the most densely populated and Oceania the least densely populated continent. The continental distribution of the estimated mid-1955 population and the corresponding population density are shown as follows:

	Population (millions)	Population per sq. km.
World	2,691	20
Africa	223	7
America (North and South)	366	9
Asia (excl. USSR)	1,481	55
Europe (excl. USSR)	409	83
Oceania	14.6	2

(1 sq. km. = 0.386 sq. mi.)

MEDICAL CARE COST

According to the Bureau of Labor Statistics the medical care cost index for June was 137.9 (1947-49 taken as 100); the transportation index was 135.3.

DEW LINE COMPLETED

That warning system known commonly as the DEW Line (Distant Early Warning) which extends from Western Alaska across the upper rim of the North American continent through Canada to Baffin Island, was placed in operation July 31.

POSTGRADUATE COURSES

The American College of Chest Physicians will present the following Postgraduate Courses on Diseases of the Chest this fall: Chicago, Ill., October 21-25; New York City, November 11-15; Los Angeles, Calif., December 9-13. Further information may be obtained from the Executive Director, 112 East Chestnut St., Chicago, Ill.

SEMINAR ON GYNECOLOGY

The University of Texas Postgraduate School of Medicine will present a three-day Seminar on Current Trends in Gynecology, October 27, 28, and 29. Guest lecturers will include Dr. Hans L. Kottmeier of Sweden. For further information communicate with the Dean of the University of Texas Post-

graduate School of Medicine, 410 Jesse Jones Library Bldg., Houston 25, Texas.

POST GRADUATE COURSE

A two-week, full time course in Radiological Safety will be given from January 6-17, 1958 by the Institute of Industrial Medicine of New York University Post-Graduate Medical School in cooperation with the NYU College of Engineering and the United States Atomic Energy Commission. For further information address: The Associate Dean, 550 First Avenue, New York 16, N.Y.

MEETING

The 14th Annual Meeting, American Medical Writers' Association (Sept. 27-28), and the 22nd Annual Meeting of the Mississippi Valley Medical Society (Sept. 25-27) will be held at the Sheraton-Jefferson Hotel, St. Louis, Mo.

Further information about these meetings may be obtained from Harold Swanberg, M.D., Secretary, W.C.U. Bldg., Quincy, Ill.

MUSIC THERAPY

The Eighth Annual Conference National Association for Music Therapy, Inc. will be held at the Michigan State University, East Lansing, Michigan, October 10, 11, 12.

FOURTH PAN-AMERICAN CONGRESS OF PHARMACY AND BIOCHEMISTRY

The Fourth Pan-American Congress of Pharmacy and Biochemistry will be held in Washington, D.C., the week of November 3, 1957, with the Mayflower Hotel as headquarters. The theme will be: "Planning the Advancement of Pharmacy throughout the Americas." Robert A. Hardt is Chairman of the Organizing Committee; his address is Roche Park, Nutley 10, New Jersey. The Executive Secretary is George B. Griffenhagen, c/o Smithsonian Institution, Washington, D.C.

URBAN SPRAWL PROBLEMS

The National Health Forum for 1958 will be held the third week of March at the

Sheraton Hotel, Philadelphia, Pa. Chairman of the Forum is Dr. Abel Wolman, professor of sanitary engineering at the Johns Hopkins University, and the co-chairman is Mr. Frank C. Moore, president of the Government Affairs Foundation.

Problems to be considered are those growing out of the "urban sprawl" and will include those problems of water supply, air pollution, transportation, hospital facilities, and related subjects.

Further information may be obtained from the National Health Council, 1790 Broadway, New York 19, N.Y.

MEETING

The International Society of Internal Medicine has announced that its Fifth International Congress of Internal Medicine will be held at the new Sheraton Hotel, Philadelphia, Pa., April 24-26, 1958.

This Society, the only international one embracing all aspects of internal medicine, was organized in 1948 and largely at the instigation of Professor Nanna Svartz of Stockholm, the physician to the King of Sweden.

T. Grier Miller, M.D., Philadelphia, is the President of the Congress; Edward R. Loveland, F.A.C.P. (Hon.) is the Secretary General and can be reached at 4200 Pine St., Philadelphia, Pa.

The Program Committee includes Frank N. Allan, M.D., Chairman, Boston; Philip S. Hench, M.D., Rochester, Minn.; Carl V. Moore, M.D., St. Louis; Albert M. Snell, M.D., Palo Alto, Calif.; Irving S. Wright, M.D., New York.

DEP'T. OF COMMERCE PUBLICATIONS

Visual Principles for Training by Television (PB 121931), contains principles of visual design which affect the clarity of a TV image. The application of these principles will greatly improve visibility of the training aids used on TV programs. Price 75¢

Instructional Film Research Reports, Vol. II, (PB 131005), is a 1,033 page book devoted to the planning, production, and use

of instructional films used in training. Price \$6.00 per copy.

Instruction Film Reports, Vol. I, (PB 111000) is also available at \$2.50 per copy.

The above may be obtained from OTS, U. S. Dep't. of Commerce, Washington 25, D.C.

FILM

The Care and Sterilization of Surgeons' Gloves is a new film approved by the American College of Surgeons and available for showing. This 15 minute film in full color and sound can be obtained for showing from Wilson Rubber Company, Canton, Ohio.

SOMETHING NEW

A spray for preserving kymograph tracings has been developed. This will obviate the necessity of preserving the tracings through the use of shellac or varnish and a pliable plastic coating can be obtained.

HEALTH

Specialization has reached such a state today that patients have to learn to diagnose themselves before they know which specialist to call.

Bishop Fulton J. Sheen, syndicated column.

SMOKING

Medical reports may be taking some of the joy out of smoking but they are certainly adding to the dinner conversation.

INFLATION

Inflation could be halted if means could be devised and used to lower the temperature of money in people's pockets.

Cincinnati Enquirer

DETERGENT

A modern child is one who, when shown the statue of Venus de Milo, says, "She certainly must have used a harsh detergent."

Farmers Equity News

SPACE SHIP

The spaceship, when it comes, will be the ultimate toy that may lead mankind from its

cloistered nursery out into the playground of the stars.—Arthur C. Clarke, *Science Digest*.

Honor Roll

Since the publication of our last list, the following sponsored one or more applicants for membership in the Association:

Col. Bernard Aabel, MSC, USA

Lt. Col. George Beam, MSC, USA, Ret.

Capt. Leon A. Bowden, MSC, Ill. NG.

Major Joseph A. Chapman, MSC, USA

Cdr. B. F. Ederer, DC, USNR

Capt. Pierre A. Finck, MC, USA

Major Maurise N. Harris, MC, AUS

Major A. E. A. Hudson, MSC, AUS

Col. Amos R. Koontz, MC, Md. NG.

Samuel S. Messinger, D.D.S.

Capt. Frank B. Voris, MC, USN

Lt. Col. Edmund H. Zabriskie, DC, USA

PROPOSED CHANGES TO BY-LAWS OF THE ASSOCIATION

The Executive Council of the Association of Military Surgeons proposes certain changes in the By-Laws of the Association. These changes will be voted on at the Business Meeting of the Association to be held during the 64th Annual Convention, Hotel Statler, Washington, D.C., October 28-30, 1957.

CHANGE 1

Paragraph 5, Article VI, Section 3.

Present reading: "The accounts of the Secretary shall be audited by *an officer of the Finance Department of the Army or of the Bureau of Supplies and Accounts of the Navy, or* a certified public accountant as soon as possible after the end of the fiscal year (*September 30*) and at such other times as the Executive Council may require."

Proposed reading: The accounts of the Secretary shall be audited by a certified

public accountant as soon as possible after the end of the fiscal year (June 30) or at such other times as the Executive Council may require.

CHANGE 2

Last sentence, Article XII, Section 6. (Retirement Plan Fund) "The fund may be invested by the Board of Trustees in *United States Government Bonds or in such other securities or deposits as are insured or guaranteed as to principal by the United States Government or a Government-owned Corporation, and yield a maximum interest rate consistent with reasonable safety and convertibility for payments,* or deposited in a bank or trust company until so invested or until used for the purposes of said fund." (The proposed amendment consists solely of the addition of the words in italics above.)

RESERVE OFFICERS WHO ATTEND OUR CONVENTION CAN EARN RETIREMENT POINT CREDITS

*Make plans
NOW
to attend*

Hotel rooms in Washington are always at a premium. The Association has been allocated a large block of rooms at the Hotel Statler where all sessions will be held; your reservations will be confirmed immediately on receipt of your request. Be sure to state you are attending our convention.

*Make YOUR
reservations
NOW!*

*The 64th
Annual Convention
of the
Association of
Military Surgeons
of the
United States*

*Hotel Statler
Washington, D. C.*

October 28, 29, 30, 1957

PLANNING FOR YOUR CONVENTION



(L to R), MAJOR JOHN NEELY, TC, USA; CAPT. D. J. O'BRIEN, MC, USN; COL. INEZ HAYNES, ANC; MRS. CHAS. S GERSONI; COL. HARRIET LEE, AMSC.



(L to R) COL. GEORGE B. GREEN, USAF (MC); LT. COL. WM. CLEGG, MSC, USA; COL. ROBT. C. KIMBERLY, MC, NG, Md; MED. DIR. BYRON J. OLSON, USPHS; COL. AMOS R. KOONTZ, MC, NG, Md.; MAJ. GEN. PAUL I. ROBINSON, MC, USA; COL. ROBT. E. BITNER, USA, Ret.



(L to R) MRS. CHAS. S GERSONI; MRS. AMOS R. KOONTZ; MRS. ROBERT C. KIMBERLY.

These ladies assure all the ladies who attend the Convention that there will be an enjoyable program for them. Watch for the September letter listing the events. Each member will receive this letter. Make your reservations as directed in the letter.

PROGRAM

64TH ANNUAL CONVENTION ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES

HOTEL STATLER, WASHINGTON, D.C., OCTOBER 28, 29, 30, 1957

THEME: "PROFESSIONAL EXCELLENCE—THE CRITERION OF MILITARY MEDICINE"

The scientific and social program for the 64th annual convention of the Association of Military Surgeons of the United States promises to be one of the most instructive

and entertaining in the history of the Association. The inspiration of the President, Colonel Amos R. Koontz, Medical Corps, National Guard of Maryland, has been a

very important factor in preparing for the members of the Association and their guests a three-day program that will not disappoint any person who attends the convention.

Assisting the president in the arrangements are the following:

Major General Paul I. Robinson, MC, U. S. Army, *General Chairman*

Colonel Robert C. Kimberly, MC, NG, Maryland, *Chairman, Scientific Program*

Captain William M. Silliphant, MC, U. S. Navy, *Chairman, Scientific Exhibits*

Mr. Steven K. Herlitz, *Chairman, Commercial Exhibits*

Colonel Inez Haynes, Army Nurse Corps, *Chairman, Registration and Reception*

Colonel Harriet S. Lee, Army Medical Spe-

cialist Corps, *Chairman, Dinners and Luncheons*

Colonel Bernard Aabel, MSC, U. S. Army, *Chairman, Ceremonies and Entertainment*

Colonel George B. Green, USAF (MC), *Chairman, Foreign Liaison*

Colonel James H. Kidder, MC, USAR, *Chairman, Reserve Officers Affairs*

Major William V. Davis, MSC, U. S. Army, *Chairman, Publicity*

Mrs. Charles S. Gersoni, *Chairman, Ladies' Events*

Dr. Byron J. Olson, U. S. Public Health Service, *Chairman, Professional Activities*

Major John W. Neelly, TC, U. S. Army, *Chairman, Transportation.*

HIGHLIGHTS OF CONVENTION

OPENING CEREMONY	OCTOBER 28
FOREIGN DELEGATES CEREMONY	OCTOBER 29
INTERNATIONAL LUNCHEON	OCTOBER 29
LADIES LUNCHEON AND FASHION SHOW	OCTOBER 29
U. S. ARMY BAND CONCERT	OCTOBER 29
HONORS NIGHT DINNER AND DANCE	OCTOBER 30

MONDAY, OCTOBER 28

9:00 A.M.—Opening Ceremony

"Professional Excellence—The Criterion of Military Medicine"

Presidential Address, COLONEL AMOS R. KOONTZ, Medical Corps, National Guard, Maryland

"The Basic Requirements for Superior Performance of Medical Officers; A Review of World War II Experience in the Field of Internal Medicine."

Hugh J. Morgan, M.D., Prof. of Medicine, Vanderbilt University School of Medicine, Nashville, Tennessee. In World War II was Brig. General, U. S. Army and Chief of Medical Consultants, Office of the Surgeon General.

Panel Meeting—"Medical Education in the Federal Services."

The Surgeons General, Army, Navy, Air Force, Public Health Service, and Medical Director, Veterans Administration.

Moderator: Dr. Frank B. Berry, Assistant Secretary of Defense (Health and Medical)

2:30 P.M. "Disaster Medicine"

Presiding: COLONEL JOSEPH R. SHAEFFER, M.C., U. S. Army, Consultant on Medical Care in Disaster, Walter Reed Army Inst. of Research, Washington, D.C.

"Quo Animo"

Major General Isidore S. Ravdin, MC, USAR (Ret.), The John Rhea Barton Professor of Surgery, University of

Pennsylvania, Philadelphia, Pa.

"Disaster Management—Part II"

John M. Whitney, M.D., USPHS, Deputy Director, United States Public Health Service, Dallas, Tex. Former Medical Director, Federal Civil Defense Administration.

"The Role of Blood in Disaster"

Colonel Douglas B. Kendrick, MC, U. S. Army, Chief Surgical Consultant, Office of the Surgeon General, U. S. Army, Washington, D.C.

"Newer Medical Training Objectives in USAREUR"

Major General Alvin L. Gorby, MC, U. S. Army, The Surgeon, United States Army, Europe.

"The Influence of Whole Body Irradiation of Recovery"

Lt. Col. James B. Hartgering, MC, U. S. Army, Director, Division of Physiology and Pharmacology, Walter Reed Army Institute of Research, Washington, D.C.

"Operation Fire Drill—U.S.A."

Major General William Shambora, MC, U. S. Army, Commanding General, Brooke Army Medical Center, Fort Sam Houston, Texas.

"A Mutual Assistance Plan for Disaster Management"

Brig. General Harold Twitchell, USAF (MC), The Surgeon, Continental Air Command, Mitchel Air Force Base, New York.

"Quo Vidis"

Rear Admiral Winchell McK. Craig, MC, USNR (Ret.), Professor of Neurosurgery, Mayo Foundation, University of Minnesota, Rochester, Minn.

TUESDAY, OCTOBER 29

Presiding: MAJOR GENERAL OLIN F. McILNAY, USAF (MC), Deputy Surgeon General, U. S. Air Force

9:00 A.M. *"The Challenge of Peace in the Pacific"*

DR. PAUL M. A. LINEBARGER, Professor of Oriental Politics, School of Advanced In-

ternational Studies, The Johns Hopkins University, Baltimore, Maryland.

"Government and Industry Today"

Mr. John Connor, President, Merck & Co., Inc., Rahway, New Jersey.

11:00 A.M. *International Delegate Ceremony*
2:30 P.M.

Presiding: BRIG. GENERAL SAM F. SEELEY, MC, U. S. Army, Chief, Professional Division, Office of The Surgeon General, U. S. Army, Washington, D.C.

"Surgery of the Large Intestine"—*Panel*

Calvin M. Smyth, M.D., Professor of Surgery, Graduate School of Medicine, University of Pennsylvania, Philadelphia, Pa.
Henry W. Cave, M.D., Former Chief of Surgery, Roosevelt Hospital, New York, N.Y.

Claude Dixon, M.D., Mayo Clinic, Rochester, Minn.

Harvey B. Stone, M.D., Associate Professor of Surgery, Emeritus, The Johns Hopkins University School of Medicine, Baltimore, Md.

8:30 P.M. *United States Army Band Concert*

WEDNESDAY, OCTOBER 30

9:00 A.M.

Presiding: REAR ADM. WINCHELL MCK. CRAIG, USNR, Ret., Professor of Neurosurgery, Mayo Foundation, University of Minnesota, Rochester, Minn.

"Management of Patients with Coronary Artery Disease."

A Joint Medical and Surgical Panel.

Medical Aspect

William D. Stroud, M.D., Professor of Cardiology, Graduate School of Medicine, University of Pennsylvania, Philadelphia, Pa.

George E. Burch, M.D., Henderson Professor and Chairman, Department of Medicine, Tulane University School of Medicine, New Orleans, La.

Thomas W. Mattingly, Colonel, MC, U. S. Army, Chief, Cardiology Service, Walter Reed Army Hospital, Washington, D.C.

Surgical Aspect

Alfred Blalock, M.D., Professor of Surgery, The Johns Hopkins University School of Medicine, Baltimore, Md.

Claude S. Beck, M.D., Professor of Cardio-Vascular Surgery and Associate Surgeon, Western Reserve University and University Hospitals, Cleveland, Ohio.

James Forsee, Brig. General, MC, U. S. Army, Deputy Commanding Officer and Chief, Department of Surgery, Walter Reed Army Hospital, Washington, D.C.

1:30 P.M. *Business Meeting*

2:30 P.M.

Presiding: MAJOR GENERAL JAMES P. COONEY, MC, U. S. Army, Deputy Surgeon General, U. S. Army

"Training of Enlisted Medical Technicians"

Panel Meeting

Russell A. Nelson, M.D. (Moderator), Director, The Johns Hopkins Hospital, Baltimore, Md.

Colonel Byron L. Steger, MC, U. S. Army,

Lt. Colonel Clyde C. Currier, USAF (MSC)

Commander Marques E. Keizur, Jr., MSC, USN

7:15 P.M. *Honors Night Dinner and Dance*

Medical Movies throughout Convention

SECTION MEETINGS

Veterinary Section

MONDAY, OCTOBER 28

2:00 P.M.

Presiding: COLONEL M. B. STEARNES, VC, U. S. Army, Director, Division of Veterinary Medicine, Walter Reed Army Institute of Research, Walter Reed Army Medical Center Washington, D.C.

"Experience in the Lengthening of Bones of Dogs"

I. By Anorganic Bone Grafts

Lt. Frank Perry, MC, USNR, National Naval Medical Center, Bethesda, Maryland

II. By Prosthesis

William I. Gay, D.V.M., Division of Research Services, National Institutes of Health, Bethesda, Maryland.

"Significance of Drugs in Food."

Charles G. Durbin, D.V.M., Food and Drug Administration, Dept. of Health, Education and Welfare, Washington, D.C.

"Radioactive Contamination of Foods and Animals."

Edwin P. Laug, Ph.D., Food and Drug Administration, Dept. of Health, Education, and Welfare, Washington, D.C.

"Military Rations"

I. Recent Developments

Lt. Colonel William D. Nettles, USAF (VC), Quartermaster Food and Container Institute for the Armed Forces, Chicago, Illinois.

II. Radiation as a Food Preservative

Lt. Roger W. Baker, VC, USA, Quartermaster Food and Container Institute for the Armed Forces, Chicago, Illinois.

Medical Specialist Corps Section

TUESDAY, OCTOBER 29

2:30 P.M.

"Professional Excellence—Is Your Personnel Shortage Showing."

PANEL DISCUSSION

General Chairman: LT. COMMANDER THELMA BARE, OTR, U. S. Navy

Moderator: Dr. Leon Konchegul, Saint Elizabeths Hospital, Washington, D.C.

Participants:

Miss Vida Jo Niebuhr, PT, USPHS.
Miss Helen Vaughn, PT, D.C. Dept. of Public Health.

Capt. Cordelia Myers, Army Med. Sp. Corps.

Mrs. Helen Cromartie, OTR, Past President, District of Columbia Occupational Therapy Association.

Capt. Barbara Hodgkins, USAF MSpc.
Miss Virginia Bounds, Dietitian, Veterans Administration.

Sustaining Membership Section

WEDNESDAY, OCTOBER 30
9:00 A.M.

Chairman of Section: C. W. SHILLING, M.D., Deputy Director, Division of Biology and Medicine and Program, Atomic Energy Commission, Washington, D.C.

Secretary of Section: MR. STUART SMITH, Wyeth Laboratories, Philadelphia, Pa.

"The Intern and Residency Program of the Federal Services."

Colonel Floyd L. Wergeland, MC, U. S. Army

Captain Eugene Jobe, MC, U. S. Navy

Colonel Larry A. Smith, USAF (MC)
Medical Director Carruth J. Wagner, U. S. Public Health Service.

John C. Nunemaker, M.D., Veterans Administration

"The Responsibility of Industry in Emergency Medical Supply Planning."

Colonel Howard B. Nelson, USAF (MSC), Office of Director, Defense Mobilization, Washington, D.C.

"How Does an Item Get on the Medical Stock List?"

Captain James T. Mudler, DC, U. S. Navy, Armed Services Medical Matériel Standardization Committee, Washington, D.C.

"A Progress Report on the Military Medical Supply Agency."

Rear Admiral W. L. Knickerbocker, SC, U. S. Navy, Executive Director for Medi-

cal Material Military Medical Supply Agency, Brooklyn, New York.

Nurses Section

WEDNESDAY, OCTOBER 30
2:30 P.M.

"The Changing Role of the Nurse."

Moderator: Marjorie Howard, Nursing Specialist, Training and Education Division, Veterans Administration, Washington, D.C.

Discussants: "The Nurse as a Clinical Specialist."

Mary Redmond, Professor of Psychiatric Nursing, Catholic University, School of Nursing, Washington, D.C.

"The Nurse as a Leader-Administrator."
Colonel Inez Haynes, Army Nurse Corps, Chief, Army Nurse Corps, Office of the Surgeon General, Washington, D.C.

"The Nurse as a Teacher"

Lt. Elizabeth Feeney, NC, U. S. Navy, Nursing Methods Analyst, Bureau of Medicine and Surgery, Department of Navy, Washington, D.C.

"The Nurse and Research"

Senior Nurse Officer Louise Anderson, USPHS, Ass't. Chief, Nursing Department, Clinical Center, National Institutes of Health, Bethesda, Maryland.

Dental Section

WEDNESDAY, OCTOBER 30
9:00 A.M.

Presiding: BRIG. GEN. LEIGH C. FAIRBANK, U. S. Army, Ret., Former Chief, Dental Corps, U. S. Army

Opening Remarks:

Major General James M. Epperly, DC, U. S. Army, Chief, U. S. Army Dental Corps, Office of The Surgeon General, Washington, D.C.

"The Effective Utilization of Dental Personnel"

George E. Waterman, D.D.S., Dental Director, U. S. Public Health Service, Chief, Dental Branch, Division of Indian Health

"Dental Treatment Planning"

Charles M. Beltin, B.A., M.S., D.D.S.,
Assistant Chief, Dental Training Center,
Veterans Administration West Side Hos-
pital, Chicago, Illinois

"Clinical Use of Antibiotics in Dentistry"

Lt. Colonel George W. Burnett, DC, U. S.
Army, Chief, Department of Research,
Dental Division, Walter Reed Army In-
stitute of Research, Washington, D.C.

"Arch Continuity Through Endodontics"

Captain C. E. Rudolph, DC, U. S. Navy,
Chief, Section of Endodontics, U. S.

Navy Dental School, National Naval Medi-
cal Center, Bethesda, Maryland

"Precautions in Biopsy Technic"

Commander H. H. Scofield, Jr., DC,
U. S. Navy, Oral Pathology Division,
U. S. Naval Dental School, National
Naval Medical Center, Bethesda, Mary-
land.

"Surgical Gingivectomy"

Major Willard H. Poor, USAF (MC),
Chief, Periodontia Section, Bolling Air
Force Base, Washington, D.C.

SCIENTIFIC EXHIBITS

ARMED FORCES INSTITUTE OF PATHOLOGY

Exhibit: "Analogous Pathologic Patterns in
Man and Animals"

Exhibitor: Lt. Col. Thomas C. Jones, VC,
USA (Ret.), Major Charlie N. Barron,
USAF (VC) and Captain Robert M. Mc-
Cully, USAF (VC), all of AFIP.

VETERANS ADMINISTRATION

Exhibit: "Audiology in the Veterans Ad-
ministration," E-613

Exhibitor: Bernard M. Anderman, Ed.D.,
Chief, Audiology & Speech Correction,
Physical Medicine & Rehabilitation, Vet-
erans Administration, Washington, D.C.
Co-Exhibitors: Norton Canfield, MD, Yale
University, School of Medicine, New
Haven, Connecticut.

G. Donald Causey, Ph.D., Chief, Acoustical
Research Audiology, Department of
Veterans Benefits, Veterans Administra-
tion, Washington, D.C.

Raymond T. Carhart, Ph.D., Consultant
in Acoustical Audiology, Northwestern
University, Chicago, Ill.

A. B. C. Knudson, M.D., Director, Physi-
cal Medicine and Rehabilitation Service,
Veterans Administration, Washington,
D.C.

ARMED FORCES INSTITUTE OF PATHOLOGY &
AIR FORCE

Exhibit: Combined Air Force-AFIP exhibit
showing the space capsule used in the cos-
mic ray experiments.

DEPARTMENT OF HEALTH, EDUCATION &
WELFARE, PUBLIC HEALTH SERVICE

Exhibit: "Continuous Visual Monitoring of
2 Rev Rotational X-ray Therapy"

Exhibitor: J. R. Andrews, MD, and Phillip
Rubin, MD, National Cancer Institute,
Public Health Service, Bethesda, Md.

Exhibit: "Blood and Blood Products"

Exhibitor: J. T. Tripp, MD, Division of
Biologics Standards, National Institute of
Health, Public Health Service, Bethesda,
Md.

ARMY

Exhibit: "Historical Volumes of the Medi-
cal Department, U. S. Army, World War
II"

Exhibitor: John B. Coates, Jr., Col, MC,
U. S. Army, Historical Unit, U. S. Army
Medical Service, OTSG.

Exhibit: "Medical Education in the U. S.
Army"

Exhibitor: Byron L. Steger, Col., MC,
U. S. Army, Chief, Education & Training
Division, OTSG.

NAVY

Exhibit: "Psychiatry in the U. S. Navy's
Operation Deep Freeze"

Exhibitors: Capt. G. N. Raines, Capt. J. E.
Nardini, Commander Herman B. Molish

Exhibit: "Newer Approaches to Study of
the Liver"

Exhibitors: George L. Calvy, Roald N.
Grant, Marvin L. Gliedman and Carroll

M. Leevey, U. S. Naval Hospital, St. Albans, New York

AIR FORCE

Exhibit: "Veterinary Medicine in Air Force Research"

Exhibitor: Lt. Col. Charles H. Snider, USAF (VC), OTSG, and Lt. Col. Neil G. MacEachern, USAF (VC), Maxwell AFB, Ala.

Exhibit: "Retinal Changes Produced by High-Intensity Ionizing Radiation"

Exhibitor: David V. L. Brown & Paul A. Cibis, USAF, School of Aviation Medicine, Randolph Air Force Base, San Antonio, Texas

WRAMC & ARMED FORCES INSTITUTE
OF PATHOLOGY

Exhibit: "Non-Penetrating Injuries of the Heart and Aorta"

Exhibitors: Thomas W. Mattingly, MC, U. S. Army, Loren Parmley, Lt. Col., MC, USA, W. C. Manion, M.D., and Edward J. Jahnke, Maj., MC, USA

ARMED FORCES INSTITUTE OF PATHOLOGY

Exhibit: "Armed Forces Institute of Pathology"

Exhibitor: W. M. Silliphant, Capt., MC, USN

TECHNICAL EXHIBITORS

Aeroplast Corporation
(Booth 46)

American Cyanamid Company
Lederle Laboratories Division
(Booth 24)

American Cyanamid Company
Surgical Products Division
(Booth 9)

American Sterilizer Company
(Booth 8)

Astra Pharmaceutical Products, Inc.
(Booth 37)

Ayerst Laboratories
(Booth 18)

Baxter Laboratories, Inc.
(Booth 11)

Becton, Dickinson & Co.
(Booth 47)

Burroughs Wellcome & Co. (USA) Inc.
(Booth 5)

Cambridge Instrument Co., Inc.
(Booth 34)

Chesebrough-Pond's, Inc.
(Booth 30)

Chicago Reference Book Co.
(Booth 36)

Chilean Iodine Educational Bureau, Inc.
(Booth 32)

Ciba Pharmaceutical Products, Inc.
(Booth 14)

The Coca-Cola Company
(Special area)

Cutter Laboratories
(Booth 2)

Desitin Chemical Co.
(Booth 16)

Doho Chemical Corp.
(Booth 15)

E & J Manufacturing Co.
(Booth 43)

Eaton Laboratories
(Booth 38)

Endo Laboratories, Inc.
(Booth 54)

Ethicon Incorporated
(Booth 53)

Florida Brace Corporation
(Booth 55)

Geigy Pharmaceuticals
Div. of Geigy Chemicals Corp.
(Booth 52)

Holland-Rantos Company, Inc.
(Booth 29)

Franklin C. Hollister Company
(Booth 48)

Industrial Acoustics Company, Inc.
(Booth 10)

Johnson & Johnson
(Booth 58)

Lakeside Laboratories, Inc.
(Booth 35)

J. B. Lippincott Company
(Booth 42)

Lloyd Brothers, Inc.
(Booth 57)

Josiah Macy, Jr. Foundation
(Booth 4)

Maico Company Incorporated
(Booth 56)

S. E. Massengill Co.
(Booth 1)

McNeil Laboratories, Inc.
(Booth 25)

Medical, Dental, Scientific Photographic
Equipment Co.
(Booth 59)

Merck Sharp & Dohme
Div. of Merck & Co., Inc.
(Booth 19)

Nepera Laboratories Div.
(Booth 51)

Parke, Davis & Company
(Booths 6 & 7)

Pfizer Laboratories
(Booth 28)

Picker X-Ray Corporation
(Booth 13)

R. J. Reynolds Tobacco Co.
(Booth 33)

J. B. Roerig and Company
(Booth 31)

Sandoz Pharmaceuticals
(Booth 17)

Schenley Laboratories, Inc.
(Booth 50)

Shering Corporation
(Booth 39)

G. D. Searle & Co.
(Booth 23)

Shampaine Company
(Booth 49)

Smith, Kline & French Laboratories
(Booths 44 & 45)

E. R. Squibb & Sons
(Booth 21)

Stephenson Corporation
(Booth 20)

Wallace Laboratories
(Booth 40)

Warner-Chilcott Laboratories
(Booth 22)

Winthrop Laboratories
(Booth 12)

Wyeth Laboratories
(Booth 27)

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RESOLUTIONS COMMITTEE

BRIG. GENERAL FRANK E. WILSON, MC,
USAR, (Chairman)

Col. F. H. Vinup, MC, NG, Md.

Pharm. Dir. Thomas A. Foster, USPHS

NOMINATING COMMITTEE

COL. WILLIAM H. TRIPLETT, MC, NG, Md.
(Chairman)

Rear Admiral Thomas F. Cooper, MC,
USN

Rear Admiral Winchell McK. Craig, MC,
USNR, Ret.

Brig. General Leigh C. Fairbanks, USA,
Ret.

Col. Robert J. Benford, USAF, (MC)

Dr. William S. Middleton, Vet. Adm.

Dr. James P. Leake, USPHS, Ret.



**Everybody benefits
when everybody gives,**



OBITUARIES

Col. Alexander Murray, U. S. Army, Ret.

Alexander Murray, Colonel, U. S. Army, Retired, died in Pasadena, Calif., on July 29, at the age of 83 following a long illness.

Colonel Murray was a native of Alexandria, Va. He received his medical degree from Columbian University, D.C., (now the George Washington University School of Medicine) in 1902 and entered the U. S. Army Medical Corps. He was assigned to the Panama Canal Zone during the construction days; later assignments included Alaska, three tours in the Philippines, one of which was during the Insurrection, one as Commander of Sternberg General Hospital, and one as Department Surgeon. During World War I he was Division Surgeon of the 40th Infantry Division, and during World War II he was recalled for service at the University of Buffalo. At the time of his retirement in 1938 he was in command of the General Dispensary in the War Department. Following his retirement he was Chief Medical Consultant of the Ross-Loos Clinic in Los Angeles. He was a Fellow of the American College of Surgeons.

Colonel Murray is survived by his widow whose address is Maryknoll Sanitarium, Monrovia, Calif., two daughters and a son: Mrs. Lyle Murray Harrah of Seattle, Wash.; Mrs. Williams, wife of Brig. Gen.

Robert P. Williams, USA, Ret., Carmel, Calif.; and Dr. Saunders Murray, Ross-Loos Clinic.

Col. Daniel P. Card, U. S. Army, Ret.

Daniel Parker Card, Colonel, Medical Corps, U. S. Army, Retired, died on July 24 at Walter Reed Army Hospital, five days before his 79th birthday. Death was due to cancer.

Colonel Card was a native of Smyrna, New York. He received his medical degree from Bellevue Medical College in 1904. His first military duty was as a contract surgeon with the Army in 1907. During a tour at the U. S. Military Academy he acted as surgeon for the West Point football squad.

In 1916 he was assigned to the French forces in France as medical-military observer. After the United States entered the War, Colonel Card served in Paris as attaché to the French Army. He later became commanding officer of a field hospital during the Meuse Argonne campaign.

In 1942 upon his retirement, Colonel Card went to the Virginia Military Institute in Lexington where he became chief doctor. There he remained for three years.

He is survived by a son, Mr. Samuel P. Card, 300 Cliro Road, Baltimore, Md.

Interment was at Baltimore, Md.



NEW BOOKS

Books may be ordered through the Association.

- Operative Surgery, Vol. III, Rectum and Anus Thorax*, by Charles Rob, M.C., M. Chir., F.R.C.S., and Rodney Smith, M.S., F.R.C.S. F. A. Davis Co., Philadelphia, Pa.
- Practical Forensic Medicine*, by Francis E. Camps, M.D. and W. B. Purchase, C.B.E., M.C., M.B., D.P.H. The Macmillan Co., New York, N.Y. 1957. Price \$13.50.
- Differentialdiagnose innerer Krankheiten*, by Prof. Dr. R. Hegglin. Intercontinental Medical Book Corp., New York, N.Y. Price \$18.95.
- Fundamentals of General Surgery*, by John Armes Gius, M.D., D.Sc. (Med.), The Year Book Publishers, Inc., Chicago, Ill. Price \$12.50.
- Clues to Suicide*, edited by Edwin S. Shneidman, Ph.D. and Norman L. Farberow, Ph.D. McGraw-Hill Book Co., Inc., New York, N.Y. Price \$5.50.
- Atlas of Eye Surgery*, by R. Townley Paton, M.D., and Herbert M. Katzin, M.D., McGraw-Hill Book Co., Inc., New York, N.Y. Price \$15.00.
- Spontaneous and Habitual Abortion*, by Carl T. Javert, M.D. McGraw-Hill Book Co., Inc., New York, N.Y. Price \$11.00.
- Law Every Nurse Should Know*, by Creighton. W. B. Saunders Co., Philadelphia, Pa. Price \$3.50.
- Prevention of Chronic Illness, Vol. 1*, Commission on Chronic Illness. Harvard University Press, Cambridge, Mass. Price \$6.00.
- An Atlas of Cardiac Surgery*, by Jorge A. Rodriguez, M.D. W. B. Saunders Co. Philadelphia, Pa. Price \$18.00.
- Psychosomatic Medicine, A Clinical Study of Psychophysiologic Reactions*, by Edward Weiss, M.D. and O. Spurgeon English, M.D. W. B. Saunders Co., Philadelphia, Pa. Price \$10.50.
- Science Looks at Smoking*, by Eric Northrup. Coward-McCann, Inc., New York, N.Y. Price \$3.00.
- The Mentally Ill Child: A Guide for Parents*, by Steven B. Getz and Elizabeth L. Rees. Charles C Thomas, Publisher, Springfield, Ill. Price \$3.50.
- Occipito Posterior Positions*, by E. L. King. Charles C Thomas, Publisher, Springfield, Ill.
- Collected Papers of The Mayo Clinic and The Mayo Foundation, Vol. XLVII, 1956*. W. B. Saunders Co., Philadelphia, Pa. Price \$12.50.
- Peripheral Nerve Regeneration*, edited by Barnes Woodhall, M.D. and Gilbert W. Beebe, Ph.D., Supt. of Documents, Government Printing Office, Washington 25, D.C.
- Gynecologic Surgery and Urology*, by Thomas L. Ball, M.D. The C. V. Mosby Co., St. Louis, Mo. Price \$20.00.
- New Unguent Bases and Lotions*, by Isaac K. Hoffman, B.S., Pharm. D. Chemical Publishing Co., Inc., New York, N.Y. Price \$4.75.
- Retirement from the Armed Forces*, prepared by a Committee of Retired Army, Navy, and Air Force Officers. The Military Service Publishing Co., Harrisburg, Pa. Price \$4.95.
- Pathology*, 3rd edition, edited by W. A. D. Anderson, M.A., M.D., F.A.C.P. The C. V. Mosby Co., St. Louis, Mo. Price \$16.00.
- Methodology of the Study of Ageing*, Ciba Foundation Colloquia on Ageing, edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch. and Cecilia M. O'Connor, B.Sc. Little, Brown & Co., Boston, Mass. Price \$6.50.
- Industrial Compensation Decisions—565*. Occupational Hazards Magazine, Cleveland 15, Ohio. Price \$12.50.
- Problems of Nursing Home Care*. The Bookstore, Univ. of Wisconsin Extension Division, Madison 6, Wis. Price \$1.00.
- Operative Surgery, Vol. IV, Head and Neck and Clearance of Lymph Nodes*, Vascular Surgery, Endocrine Glands. Under the General Editorship of Charles Rob, M.C., M.Chir., F.R.C.S. and Rodney Smith, M.S., F.R.C.S. F. A. Davis Co., Philadelphia, Pa.

BOOK REVIEWS

1957 MEDICAL PROGRESS. A Review of Medical Advances During 1956. Edited by Morris Fishbein, M.D.; 29 contributors. 367 pages. The Blakiston Division, McGraw-Hill Book Company, Inc., New York, Toronto, and London. 1957. Price \$5.00.

An immense amount of work is represented in this book in which many capable persons have reviewed the medical literature of 1956, and have recorded for us the important advances.

There are 19 chapters and an index. At the end of each chapter is a list of references should one wish to pursue further the points brought out in the chapter. Thus the book is well documented.

There is a chapter on "New Drugs" and one on "Laboratory Procedures." Unfortunately there is no section on *pediatrics* and it is believed this subject should be covered in future *Medical Progress* books.

This work is recommended for the physicians desk and should, of course, be consulted frequently.

COL. ROBERT E. BITNER, USA, RET.

HOW TO SURVIVE ON LAND AND SEA. Individual Survival. 2nd revised edition. 368 pages, 375 illustrations. United States Naval Institute, Annapolis. 1957. Price \$4.00.

This book was originally prepared for the instruction of trainees in the aviation service of the United States Navy. This is the second edition; it has been revised by a committee of the V-Five Association.

Any person who loves the outdoors, will find this book of great interest; he does not have to be interested necessarily in aviation since the book deals with survival in whatever area a person may be.

The book is profusely illustrated. There is a chapter on survival under atomic, biological, and chemical warfare attack. A Glossary and Scientific Terminology section is valuable, as is an extensive bibliography section.

This book is recommended for sportsmen, campers, and certainly should be made available to Boy Scout troops.

COL. ROBERT E. BITNER, USA, RET.

THE PHYSICIAN-WRITER'S BOOK—Tricks of the Trade of Medical Writing. By Richard M. Hewitt, A.M., M.D., Senior Consultant, Sec-

tion on Publications, The Mayo Clinic. 415 pages, 37 figures. W. B. Saunders Company, Philadelphia and London. 1957. Price \$9.00.

From his extensive experience, Doctor Hewitt has prepared a valuable book on medical writing. The application of the principles and "tricks of the trade" set forth in this book by authors of medical articles would certainly make for clarity in the medical literature. The work of editors and redactors would be simplified, but more than that the busy physician who must, of course, read would have an easier time in doing that necessary reading.

In the preface Dr. Hewitt states, "The aim in preparing the book was to aid the inexperienced, inexpert, occasional physician-author, whose material is written for other physicians." Also, "Presumably, however, this book will not be read from beginning to end but will be used as a manual."

We urge every author to consult the pages of this book in the interest of better medical writing.

COL. ROBERT E. BITNER, USA, RET.

OCCUPATIONAL DISEASES OF THE SKIN. 3rd Ed, By Louis Schwartz, M.D., Consultant in Dermatology, National Institutes of Health; Louis Tulipan, M.D., Consulting Dermatologist, Bellevue Hospital; and Donald J. Birmingham, M.D., Medical Director, Chief Dermatologist, Occupational Health Program, U. S. Public Health Service. 981 pages, 189 figs., 2 color plates. Lea & Febiger, Philadelphia. 1957. Price \$18.00.

In the ten year interval between the publication of the previous edition of this reference work, many new industrial hazards have appeared which affect the skin. New techniques, both in industry and in science, have produced new dermatologic problems. The recognition of these hazards are important factors, and no book is more authoritative and informative than this one, especially in view of the amazing experience and ability of the senior author. The new edition is essentially the same as the previous one; it does, however, incorporate many of the new procedures and situations which have arisen. The discussion of open and prophetic patch tests are significant.

The new chapter on occupational marks is extremely interesting and reads almost like a text book in crime detection. It certainly is significant, and makes the diagnostic problem in some occupational hazards much easier. Covering the various types of characteristic markings on the skin from

various occupations, the discovery of these immediately labels the individual's occupation and gives a clue to the etiologic agent of the dermatoses presented.

A new chapter has been added to take care of more recent problems. Among these are the skin hazards caused by detergents and wetting agents, and the chapter on radiation dermatoses. This latter chapter is probably the most important one in this new edition since the emphasis on radiation throughout the social, scientific and industrial world has been a source of greater interest than anything else in the last ten years.

An occasional table has been deleted, particularly the one involving the causative agents of contact dermatitis in the cosmetic industry. It is to be regretted that this one has been left out since it furnished clues, to the average dermatologist, as to the substances which might be suspects in cosmetic dermatitis. It would seem, rather than having been deleted, it should have been revised to include the new types of chemicals which are being used in cosmetics today, particularly such things as the zirconium salts which are being used in deodorants, and which are producing considerable amount of trouble. New illustrations are scattered throughout the text.

In spite of the fact that this edition is essentially the same as the previous one, yet the editions of the new problems make it a valuable increment to the dermatologic library.

MURRAY M. ROBINSON, M.D.

BONE STRUCTURE AND METABOLISM. Ciba Foundation Symposium. Edited by G. E. W. Wolstenholme, O.B.E., M.A., M.G., B.Ch., and Cecilia M. O'Connor, B.Sc. 299 pages. Little, Brown and Company, Boston. 1956. Price \$8.00.

This interesting volume gives the reader a glimpse into the field of future medicine. The composition of the individual histological components of bone and cartilage has been studied in most minute detail, more so than was previously generally known. Not only that but the living anatomical and molecular structure of bone is discussed. Interesting subjects such as the structure of bone salts, the histological remodeling of adult bone and other basic aspects of bone are presented. Fibrogenesis and the formation of matrix in developing bone have been studied in tissue cultures optically by phase contrast and interference microscopy. Experimental bone disease is presented in the light of the latest scientific investigation. The research reported in the paper concerning the structure of bone salts was supported in part by the Air Research and Development Command, United States Air Force. Hormones, radio-active material, experimental bone disease, vascularity, vitamins, trauma and their effect on bone is presented.

This is a book about the basic aspects of this subject and should be of interest to all physicians and surgeons who treat disorders of any kind of bones.

It represents a step towards the solution of the fundamental aspects and question of what living tissue actually is.

W. COMPERE BASOM, M.D.

ENCYCLOPEDIA GUIDE TO NURSING. By Helen F. Hansen, R.M., M.A., Educational Director, University of California School of Nursing. 406 pages, 8 color plates (anatomy). The Blakiston Division, McGraw-Hill Book Co., Inc., New York, Toronto, London. 1957. Price \$6.00.

The preface of this book states, "In the study and practice of nursing, there is a constant need for guiding principles, brief summaries of subjects related to the allied medical sciences, and explanations of techniques and procedures." This book attempts to meet that need.

It should be stated that the book is not a textbook nor a dictionary, although turning its pages one would at the first glance suspect that it might be a dictionary. Although the style of a dictionary is followed, the information given under a subject is broader than a mere definition; broad nursing principles are covered, reminders in other words.

The appendixes cover common abbreviations, prefixes, table of elements, tables of measures and temperature equivalents.

For a quick reference this book will be found invaluable to nurses.

A. J. STEPHENS

PROCEEDINGS OF THE THIRD NATIONAL CANCER CONFERENCE, held at Detroit, June 4-6, 1956. Sponsored by the American Cancer Society, Inc., and National Cancer Institute, NIH, Bethesda, Md. 961 pages, illustrated. J. B. Lippincott Company, Philadelphia and Montreal. 1957. Price \$9.00.

All who follow and keep abreast with the current developments of cancer research and its clinical application and appraisal will welcome and want this volume nearby. It maintains the highly informative scholarly level of the two previous Conference volumes of 1949 and 1952.

There are discussions in the form of lectures, panels and symposia on biology, physiology, pathology, metabolism, pathogenesis, and epidemiology as it relates to cancer, and biometria of medical data. In addition the subject is approached from the standpoint of virology, chemotherapy, cytology, endocrinology and studies on experimental cancer. Newer therapeutic procedures are evaluated and new criteria for specific treatments are presented. Finally, there is an excellent analysis and summation of the important facts brought out in the conference.

Pages 85 to 957 cover the clinical symposia on Cancer of the Breast, Prostate, Leukemias and Lymphomas, Chemotherapy, Lung, Head and Neck, Female Genital Tract, Gastrointestinal Tract and finally a symposium on the end results in the treatment of cancer. These symposia are packed with what the internist, general practitioner and surgeon want to know about cancer.

There are very adequate illustrations, charts and diagrams. One might desire a subject index rather than an author index, but this does not detract from this well organized and comprehensive volume on the very important subject of cancer.

CAPT. R. M. MURRAY, MC, USN

INJURIES OF THE HAND. By Ronald Furlong, F.R.C.S., Ass't. Orthopedic Surgeon, St. Thomas's Hospital, London; 215 pages, 99 illustrations. Little, Brown and Company, Boston. 1957. Price \$9.00.

The author's purpose is to present a simplification of treatment of hand injuries to the surgeon little versed in hand surgery, and he succeeds nicely in outlining the essentials of hand care in a very practical and readable manner. The early chapters include good coverage of functional anatomy, pre-operative considerations, injuries and infections of the soft parts and their treatment. The later chapters include nerve injuries, injuries to bone and post-traumatic disabilities, the latter two subjects being given excellent coverage.

The only major subject on which one can take real issue with the author, is on nerve repair. He condemns, in general, primary nerve repair. While all agree that in the traumatized wound secondary repair is preferable, certainly in a fresh cleanly incised wound, primary repair gives the best opportunity for nerve regeneration, regardless of the nerve or level of cut.

This worthwhile volume is recommended to those interested in hand surgery.

CAPT. JOSEPH R. CONNELLY, MC, USN

MENTAL DEPRESSIONS AND THEIR TREATMENT. By Samuel Henry Kraines, M.D., Formerly Clinical Assistant Professor of Psychiatry, University of Illinois College of Medicine. 555 pages. The Macmillan Company, New York. 1957. Price \$8.00.

This book is a challenge to the psychodynamic etiology of Manic-Depressive Illness. The author attempts in sixteen chapters to refute the Freudian theories and cites two hundred case histories to substantiate his arguments, but not too convincingly. He states that, "Psychological mechanisms are always in operation, but rarely produce incapacitating symptoms in the normal, premorbid personality. With the advent of the depression, however, the adjusting mechanism is impaired and any latent unhealthy psychologic patterns will then

be expressed, frequently with great intensity. Thus, the person who 'normally' is given to psychosomatic expressions of tension may develop intense psychosomatic fears during his manic-depressive depression. One who has been dependent, inadequate, self-defeating in his 'normal' state, often becomes a whining, complaining, nagging patient. The perfectionist usually becomes an obsessive-compulsive person in a depression. The patient who develops paranoid ideas during his overall depression will usually be found to have been a sensitive, suspicious person during his 'normal life.' Schizophrenic-like symptoms involving sexual accusations by strange persons frequently have as basis an earlier intense sense of sexual frustration. The involuntional melancholia patient, who is tense, agitated, full of the most intense kinds of self-condemnation, is often found to have been in his 'natural' state a rigid, uncompromising person, incapable of toleration for himself or others. Thus the Manic-Depressive Illness is not the result of an unhealthy premorbid personality; rather, once the illness occurs, there follows an intensification of certain personality traits. . . . It is therefore concluded that psychic traumata infrequently predispose or precipitate a manic-depressive attack. In those patients where an intense psychic trauma seem to precipitate an attack there is strong physiologic susceptibility. The corollary conclusion is that after the attack has occurred, psychic factors play a major role in modifying and prolonging the primary symptoms. They may, indeed, produce symptoms which will persist after the Manic-Depressive Illness itself has disappeared."

The first part of the book discusses psychopathology, physiopathology, heredity, and various syndromes that are found in this illness. In the last two chapters he discusses psychological therapy and biological therapies, including the newer drugs, and the various forms of shock therapy. There are references at the end of most of the chapters and an accumulative bibliography at the end of the book, and the whole book is well indexed.

Although this book will no doubt be challenged by analytically oriented psychiatrists, it does give much thought. It is easy reading and not too heavy with psychiatric terms.

COMDR. JAMES L. MCCARTNEY, USNR, RET.

CALDERWOOD'S ORTHOPEDIC NURSING. 4th Ed. Revised by Carroll B. Larson, M.D., F.A.C.S., Professor of Orthopedic Surgery, University of Iowa; and Marjorie Gould, R.N., B.S., M.S., Supervisor of Orthopedic Nursing, State University of Iowa. 701 pages, 307 illustrations. The C. V. Mosby Company, St. Louis. 1957. Price \$5.75.

This edition of a standard text on orthopedic nursing is a complete revision of its predecessor. New procedures and methods of treatment have

been assembled within this work to help bring the nurse up-to-date in her important part in the pre-operative and postoperative management of the orthopedic patient. The precept that orthopedic nursing care is applicable to all patients and is not limited to the specialty of orthopedics was illustrated by the discussion on posture and body mechanics in the normal patient, body alignment for the bed patient, and the postural problems of the bed patient. These sections, along with the section on the care of the chronically ill, make the first unit of this text almost mandatory reading material for all members of nursing staffs.

The second unit of the book, dealing with general features of orthopedic nursing, amply describes the nursing care of patients in casts and traction and the use of orthopedic linens and restraints. The remaining units of the book deal with the nurse's role in the general care of patients with congenital deformities, developmental diseases of the bone, infections of bones and joints, metabolic bone diseases, arthritis, poliomyelitis, cerebral palsy, fractures and dislocations, special operative procedures, bone tumors, and various neuro-muscular afflictions.

This book is to be recommended for all nurses and teachers of nurses.

LT. COL. DAVID C. KELSEY, USAF (MC)

THERAPEUTIC EXERCISE FOR BODY ALIGNMENT AND FUNCTION. By Marian Williams, Ph.D., Ass't Professor of Physical Therapy, School of Medicine, Stanford University; and Catherine Worthingham, Ph.D., Director of Professional Education, The National Foundation for Infantile Paralysis, Inc. Exercise illustrations by Harold Black. 127 pages. W. B. Saunders Company, Philadelphia and London. 1957. Price \$3.50.

This book has five chapters: (1) Introduction and Standing Posture, (2) Analysis of Body Alignment, (3) The Therapeutic Exercise Program, (4) Principles of Treatment and Exercises for the Various Areas, (5) Positions of the Body in Activity and Rest. The appendix contains sketches of the muscles of primary concern. The index completes the book.

This book is recommended to physicians and allied science personnel who have need for a text which describes exercises for muscle development.

COL. ROBERT E. BITNER, USA, RET.

GOEPP'S MEDICAL STATE BOARD QUESTIONS AND ANSWERS. 9th Ed. By Harrison F. Flippin, M.D., Professor of Clinical Microbiology, Graduate School of Medicine, University of Pennsylvania, and Consultants. 569 pages. W. B. SAUNDERS COMPANY, Philadelphia and London. 1957. Price \$8.00.

This edition of a standard medical question and answer reference is edited by Harrison F. Flippin,

M.D., aided by four editorial consultants. Dr. R. Max Goepf died in 1950, the year of publication of the 8th. edition. Many revisions and extensive rewriting are noteworthy improvements. More space is given to the Basic Sciences. Considerable new material including the steroids, new cardiovascular drugs, cardiac surgery, advances in anesthesiology, the tranquilizers and new antimicrobial agents have been added, bringing this edition entirely up to date. Answers are clearly defined and generally more concise, resulting in 100 less pages than in the 8th edition. The book is highly recommended to students of medicine and all who desire brief authoritative answers to medical queries.

COL. H. P. MARVIN, USA, RET.

PRACTICAL REFRACTION. By Bernard C. Gettes, M.D., Ass't Professor of Ophthalmology, Graduate School of Medicine, University of Pennsylvania. 170 pages, 58 figures. Grune & Stratton, New York. 1957. Price \$6.50.

This book is one on practical refraction just as the title indicates, and has been written so as to present the clinical features minus the background of physiological and geometric optics. The sketches and illustrations as well as photographs of optical instruments are excellent. This little book is designed to give a comprehensive view of the whole field of clinical refraction. The author has had wide experience in this field as a writer, teacher and practicing ophthalmologist. The material is presented to provide a handbook of all the essential information on refraction that is needed in the office practice of clinical refraction. Many of the features that are difficult to teach are unusually well explained in this textbook which should have a wide welcome and daily use by practicing ophthalmologists.

I believe the author achieved his aim in this book, which was to present the whole problem of refraction from a practical viewpoint and yet with a conciseness that makes it adaptable to students of refraction and practicing ophthalmologists alike. The book is highly recommended and one is impressed by the fact that the author shows unusually good teaching ability.

COL. ROLAND I. PRITIKIN, MC, USAR

ORAL MEDICINE. Diagnosis and Treatment. 3rd Ed. By Lester W. Burket, A.B., D.D.S., M.D., Sc.D., Professor of Oral Medicine and Dean, School of Dentistry, University of Pennsylvania; and S. Gordon Castigliano, B.A., B.S., M.D., F.A.C.S., Chief, Department of Head and Neck Tumors, American Oncologic Hospital, Philadelphia. 558 pages, 391 illustrations. J. B. Lippincott Company, Philadelphia and Montreal. 1957. Price \$14.00.

In the new edition of this standard and well es-

published text, the author has made revisions and additions based on recent advances in the healing arts.

It is manifest that the dentist is aware of the importance of the "Complete Patient Concept"; this text gives a complete and well organized insight into the inter-relationship of oral and systemic disease.

By rewriting and expanding some of the chapters, the value of the book has been greatly increased. The concepts on history taking, diagnosis, ulceronecrotic gingivostomatitis, oral manifestations of dermatologic disease, have been effectively enlarged. The chapter on "Pain" has been rewritten. New subjects discussed include fibrous dysplasia, pigmentation of the oral mucosa and serum hepatitis. The colored plates of a special atlas section, though sparing, will be helpful in differentiating the oral lesions most commonly found in daily practice. A regional diagnostic index classifies and groups the diseases in logical order for study or reference.

Outdated references have been replaced by current papers. New illustrative material has been added.

This text cannot be too highly recommended to practitioners of medicine and dentistry as a reference book and it is particularly suited to those striving for higher qualifications.

J. F. PETERS, D.D.S.

TRAITÉ DES URGENCES EN CHIRURGIE. Two vols. By P. Brocq, F. Poilleux, and R. Chabrut, with collaboration of A. Germain, Cl. Houdard, Cl. Frileux and B. Pertuiset. 1,322 pages, with 1,101 figures. Masson et Cie, Paris, 1956. Price 9,500 fr.

The authors of this book have succeeded in arranging in practical form a vast amount of information, without redundancy or any overlap. After a concise opening section on anesthesia, surgical physiology, and post-operative care (the importance of the latter being constantly stressed throughout the book), the wide range of surgical emergencies are considered regionally in the body, both those of a traumatic and disease nature. The greatest space is given to the surgical problems of urgent nature in the abdomen and the extremities, and the greatest detail of actual treatment is in the section on the extremities (orthopedics).

Actual surgical techniques are discussed sufficiently, but not at great length, and the methods recommended are proved, standard ones with which no modern surgeon could find much fault. The indications for treatment are of major concern to the authors, and they repeatedly point out the necessity of fully understanding, or at least so far as

possible, the nature of the emergency (just as in other, more deliberately planned surgery), before plunging into the problem in the hope that in the process of the operation the true nature of the situation will reveal itself. There is very little "discussion"; directions are given directly and affirmatively. The illustrations are copious and almost without exception are excellent because of their simplicity. This book will find much use in the hands of military surgeons, industrial surgeons, and doctors assigned to receiving and emergency rooms in large city hospitals. It is altogether a practical, working text.

The authors are aware of all that is current in emergency measures in their own country as elsewhere, but there is no section set aside for specifically listed references to the literature. The alphabetic index and the general table of contents, neither one alone is sufficient, but used together they are fairly effective. A scant two pages is devoted to the emergency care of injured peripheral nerves. But these minor criticisms are quite over-ridden by the many good features of these handsome and useful volumes.

JOHN MARTIN, M.D.

HEADACHE, MANAGEMENT OF THE PATIENT. By Perry S. MacNeal, M.D., F.A.C.P., Ass't. Professor of Clinical Medicine, Jefferson Medical College; Bernard J. Alpers, M.D., Sc.D., F.A.C.P., Head of Dep't. of Neurology, Jefferson Medical College; and William R. O'Brien, M.D., F.A.P.A., Head of Dep't. of Psychiatry, Pennsylvania Hospital. 145 pages. Lea & Febiger, Philadelphia. 1957. Price \$3.50.

To properly treat patients who complain of headaches requires an understanding of the various mechanisms producing head pain whether organic, psychogenic or vascular. There must also be a realization that headaches are often associated with such systemic conditions as metabolic diseases, infections and cardiovascular disorders.

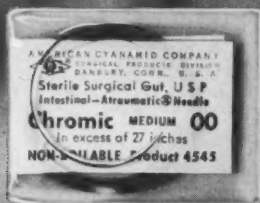
Of fundamental importance is a detailed understanding of each patient as an individual including history and physical factors, personality, likes and dislikes, fears and frustrations.

The authors present points of differentiation and treatment methods for headaches. Causes of same may be (1) intracranial lesions (2) tension (3) psychogenic factors (4) vascular disturbances and (5) extracranial etiology. Diagnostic technics are briefly discussed.

This 145 page monograph gives a practical approach to the intriguing and often baffling problem of headache.

COL. H. P. MARVIN, USA, RET.

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